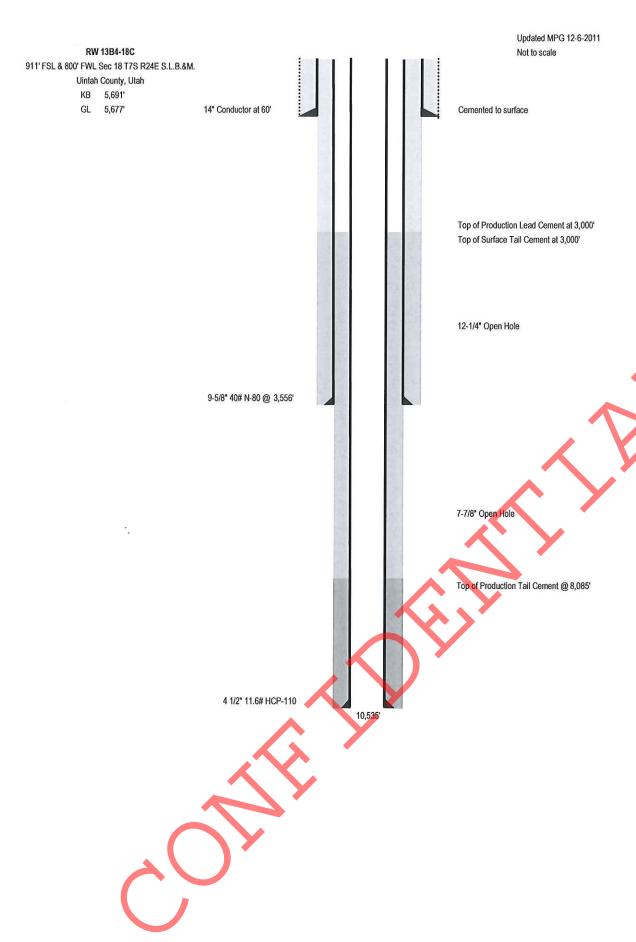
STATE OF UTAH  DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING  FORM 3  AMENDED REPORT												
APPLICATION FOR PERMIT TO DRILL							1. WELL NAME and NUMBER RW 13B4-18C					
2. TYPE OF WORK  DRILL NEW WELL ( REENTER P&A WELL DEEPEN WELD WELL DEEPEN WELL DEEPEN WELL DEEPEN WELL DEEPEN WELL DEEPEN WEL						3. FIELD OR WILDCAT  RED WASH						
4. TYPE (	OF WELL		Gas Well		d Methane Well: NO			5. UNIT or COMMUNI	TIZATION A		NT NAM	E
6. NAME	OF OPERATO	R			COMPANY			7. OPERATOR PHONE				
8. ADDRE	SS OF OPERA	TOR			n, Vernal, Ut, 84078			9. OPERATOR E-MAIL debbie.stanberry@qepres.com				
	RAL LEASE NU L, INDIAN, OR				11. MINERAL OWNERS	- C		12. SURFACE OWNERSHIP				
		UTU02148	12 = 'fee'\		FEDERAL (INDI	AN () STATE (_	STATE FEE FEDERAL INDIAN STATE FEE  14. SURFACE OWNER PHONE (if box 12 = 'fee')				E(_)	
		FACE OWNER (if I						16. SURFACE OWNE			·	
IS. ADDI		AGE OWNER (III	30X 12 = 166 )		40 INTEND TO COMM	NO. E BRODUSTION	LEDOM		I E-MAIL (I	12	. 100 )	
	N ALLOTTEE 2 = 'INDIAN')	OR TRIBE NAME			18. INTEND TO COMMINICATION  YES (Submit Commit Com				19. SLANT  VERTICAL DIRECTIONAL HORIZONTAL			
20. LOC	ATION OF WE	LL		FOC	OTAGES	QTR-QTR	SECTION	TOWNSHIP	RAN	GE	МЕ	RIDIAN
LOCATI	ON AT SURFA	CE		911 FSL	_ 800 FWL	SWSW	18	7.0 \$	24.0	Ε		S
Top of I	Jppermost Pro	oducing Zone		911 FSL	L 800 FWL	SWSW	18	7.0 S	24.0	Ε		S
At Tota	l Depth			911 FSL	L 800 FWL	SWSW	18	7.0 S	24.0	E		S
21. COU	NTY	UINTAH		2	22. DISTANCE TO NEAR	REST LEASE LINE (F	eet)	23. NUMBER OF ACRES IN DRILLING UNIT 40				
					25. DISTANCE TO NEAR (Applied For Drilling o		POOL	<b>26. PROPOSED DEPTH</b> MD: 10535 TVD: 10535				
27. ELEV	ATION - GROU	JND LEVEL 5677			28. BOND NUMBER	ESB000024		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE A-36125/ 49-2153				
					Hole, Casing,	and Cement Info	rmation					
String	Hole Size	Casing Size	Length	Weight			I I a II ib ad	CementSacksYieldburton Light , Type Unknown4603.12			Weight	
Surf	12.25	9.625	0 - 3556	40.0	N-80 LT&C	0.0		n Premium , Type Unk		190	3.12 1.47	11.0
Prod	7.875	4.5	0 - 10535	11.6	HCP-110 LT&C	10.5		on Light , Type Unk		550	3.18	11.0
							Halliburto	Halliburton Premium , Type Unknown   510   1.65   13.5				
				X	АТ	TACHMENTS						
	VE	ERIFY THE FOL	LOWING ARE	ATTACH	HED IN ACCORDANG	CE WITH THE UTA	AH OIL AND GAS	S CONSERVATION G	SENERAL	RULES		
<b>WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER</b>						Г сом	COMPLETE DRILLING PLAN					
AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)					FORM	FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER						
DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZON					RIZONTALLY DRILLED)	г торо	TOPOGRAPHICAL MAP					
NAME Valyn Davis TITLE Regulatory Affairs Analys					nalyst	PHONE 435 781-4369						
SIGNATURE DATE 12				ATE 12/14/2011		EMAIL Valyn.Davis@qepres.com						
API NUMBER ASSIGNED 43047522430000  APPROVAL  Permit Manager												

# **QEP Energy Company RW 13B4-18C**

## **Summarized Drilling Procedure**

- 1. Construct location per plat.
- 2. MIRU air drilling rig.
- 3. Pre-set conductor.
- 4. Nipple up diverter system.
- 5. Drill 12-1/4" hole to 3,556' with air/mist.
- 6. RIH with 9-5/8" 40# N-80 casing and cement same per program.
- 7. RDMO air drilling rig.
- 8. MIRU conventional drilling rig.
- 9. NU and test 5M BOPE.
- 10. Drill 7-7/8" hole from 10,535' using conventional mud systems.
- 11. Log well. Triple or Quad-Combo (GR, NEU/DEN, IND, RES, SON)
- 12. RIH with 4-1/2" 11.6# HCP-110 casing and cement same per program.
- 13. Pressure test casing.
- 14. ND BOP's and NU remainder of wellhead. Set BPV.
- 15. RDMO.



QEP ENERGY COMPANY RW 13B4-18C Uintah County, Utah Section 18-T7S-R24E

#### DRILLING PROGRAM

# ONSHORE OIL & GAS ORDER NO. 1 Approval of Operations on Onshore Federal Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil & Gas No. 1, and the approved plan of operations. The operator is fully responsible for the actions of its subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

#### 1. Formation Tops

The estimated top of important geologic markers are as follows:

<u>Formation</u>	<u>Depth</u>
Uinta	Surface
Green River	2,807
Mahogany	3,506
Wasatch	5,895'
Mesaverde	8,085
Sego	10,435
TD	10,535

#### 2. Anticipated Depths of Oil, Gas, Water, and Other Mineral Bearing Zones

The estimated depths at which the top of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered as follows:

Substance	<u>Formation</u>	<u>Depth</u>
Oil	Green River	2,807
Gas	Wasatch	5,895
Gas	Mesaverde	8,085
Gas	Sego	10,435

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

All water shows and water-bearing sands will be reported to the BLM in Vernal, Utah. Copies of State of Utah form OGC-8-X are acceptable. If flows are detected, samples will be submitted to the BLM along with any water analyses conducted. Fresh water will be obtained from Wonsits Valley water right A36125 (which was filed on May 7, 1964)

QEP ENERGY COMPANY RW 13B4-18C Uintah County, Utah Section 18-T7S-R24E

or Red Wash water right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System, to supply fresh water for drilling purposes. All water resulting from drilling operations will be disposed of at Red Wash Central Battery Disposal site; SWSE, Section 27, T7S, R23E or Wonsits Valley Disposal Site; SWNW, Section 12, T8S, R21E.

#### 3. Operator's Specification for Pressure Control Equipment

- A. An 11" 5000 psi double ram with blind rams and pipe rams, annular preventer and drilling spool or BOP with 2 side outlets.
- B. All BOP connections subject to pressure shall be flanged, welded or clamped.
- C. Kill line (2" min), 2 choke line valves (3" min), choke line (3" min), 2 kill line valves (2" min) and a check valve, 2 chokes with one remotely controlled from rig floor and a pressure gauge on choke manifold.
- D. Upper and Lower Kelly cock valves with handles and safety valve and subs to fit all drill string connections.
- E. IBOP or float sub available.
- F. Fill up line must be installed above the uppermost preventer.
- G. Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 50 percent of internal yield pressure of casing whichever is less. BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc..., for a 5M system and individual components shall be operable as designed.

#### 4. <u>Casing Design:</u>

Hole Size	Csg. Size	Top (MD)	Bottom (MD)	Wt.	Grade	Thread	Cond.	Expected MW(ppg)
17 ½"	14"	Sfc	60'	Steel	Conductor	None	Used	N/A
12-1/4"	9-5/8"	Sfc	3,556	40#	N-80	LTC	New	Air
7 7/8"	4-1/2"	Sfc	10,535	11.6#	HCP-110	LTC	New	10.5

QEP ENERGY COMPANY RW 13B4-18C Uintah County, Utah Section 18-T7S-R24E

	Casin	g Strengths:	Collapse	Burst	Tensile (min)	
9-5/8"	40#	N-80	LTC	3,090 psi	5,750 psi	916,000 lb.
4 1/2"	11.6#	HCP-110	LTC	8,830 psi	10,710 psi	279,000 lb.

#### **Casing Design Factors**

\*The casing prescribed above meets or exceeds the below listed design factors.

Burst: 1.2 Collapse: 1.2 Tension: 1.6

Maximum anticipated mud weight: 10.5 ppg Maximum anticipated surface treating pressure: 7,200 psi

#### 5. Cementing Program

#### 9-5/8" Surface Casing:

Lead Slurry: Surface (TOC) – 3,000°. 460 sks (1409 ft<sup>3</sup>) Halliburton Extendacem, 1 pps Granulite TR 1/4, 0.125 pps Poly-E-Flake, Slurry Weight 11.0 ppg, 3.12 ft<sup>3</sup>/sk, 50% XS in open hole only.

Tail Slurry: 3,000' – 3,556'. 190 sx (279 ft<sup>3</sup>) Halliburton Econocem, 0.2% HR-5 Retarder, 1.0 pps Granulite TR 1/4, 0.125 pps Poly-E-Flake, Slurry Weight 13.5 ppg, 1.47 ft<sup>3</sup>/sk, 50% XS in open hole.

#### 4-1/2" Production Casing\*:

Lead Slurry: 3,000' (TOC) — 8,085'. 550 sks (1,728 ft<sup>3</sup>) Halliburton Extendacem, 1 pps Granulite 1/4, 0.125 pps Poly–E–Flake. Slurry Weight 11.0 lb/gal, 3.18 ft<sup>3</sup>/sk, 50% excess over gauge in open hole only.

**Tail Slurry: 8,085'** – **10,535'**. 510 sks (840 ft<sup>3</sup>), Halliburton Expandacem, 0.3% Super CBL (Expander), 0.6% HR-800 (Retarder), 1 pps Granulite TR ½, 0.125 pps Poly-E-Flake (LCM). Slurry Weight 13.5 lb/gal, 1.65 ft<sup>3</sup>/sk, 50% excess over gauge hole.

<sup>\*</sup>Final cement volumes to be calculated from caliper log, if run.

QEP ENERGY COMPANY RW 13B4-18C Uintah County, Utah Section 18-T7S-R24E

#### 6. <u>Auxiliary Equipment</u>

- A. Kelly Cock yes
- B. Float at the bit Yes
- C. Monitoring equipment on the mud system PVT/Flow Show
- D. Full opening safety valve on the rig floor Yes
- E. Rotating Head Yes
- F. Request for Variance:

Drilling surface hole with air:

A variance from 43 CFR 3160 Onshore Oil and Gas Order #2, Section III Requirements, subsection E. Special Drilling Operations is requested for the specific operation of drilling and setting surface casing on the subject well with a truck mounted air rig. The variance from the following requirements of Order #2 is requested because surface casing depth for this well is 50' into the Mahogany Bench formation and high pressures are not expected.

- 1. **Properly lubricated and maintained rotating head** A diverter system in place of a rotating head. The diverter system forces the air and cutting returns to the reserve pit and is used to drill the surface casing.
- 2. Blooie line discharge 100 feet from wellbore and securely anchored the blooie line discharge for this operation will be located 50 to 70 feet from the wellhead. This reduced length is necessary due to the smaller location size to minimize surface disturbance.
- 3. Automatic igniter or continuous pilot light on blooie line a diffuser will be used rather than an automatic pilot/igniter. Water is injected into the compressed air and eliminates the need for a pilot light and the need for dust suppression equipment.
- 4. Compressors located in the opposite direction from the blooie line a minimum of 100 feet from the wellbore compressors located within 50 feet on the opposite side of the wellbore from the blooie line and is equipped with a 1) emergency kill switch on the driller's console, 2) pressure relief valves on the compressors, 3) spark arrestors on the motors.
- 5. Well Kill Fluid A suitable amount of water and weighting agents will be available in the reserve pit during air drilling operations to kill the well, if necessary. No overpressured zones are expected in the area.
- 6. **Deflector on the end of the blooie line** QEP will mount a deflector unit at the end of the blooie line for the purpose of changing the direction and velocity of the air and cuttings flow into the reserve pit. Changing the

QEP ENERGY COMPANY RW 13B4-18C Uintah County, Utah Section 18-T7S-R24E

> velocity and direction of the cuttings and air will preserve the pit liner. In the event the deflector washes out due to erosion caused by the sand blasting effect of the cuttings, there will be no problem because the deflector is mounted on the very end of the blooie. A washed out deflector will be easily replaced.

- 7. Flare Pit there will be no need of a flare pit during the surface hole air drilling operation because the blooie line is routed directly to the reserve pit. When the big rig arrives for the main drilling after setting surface casing, a flare box will be installed and all flare lines will be routed to the flare box.
- G. Drilling below the 9-5/8" casing will be done with water based mud. Maximum anticipated mud weight is 10.5 ppg.
- H. No minimum quantity of weight material will be required to be kept on location.
- I. Gas detector will be used from intermediate casing depth to TD.

#### 7. <u>Testing, logging and coring program</u>

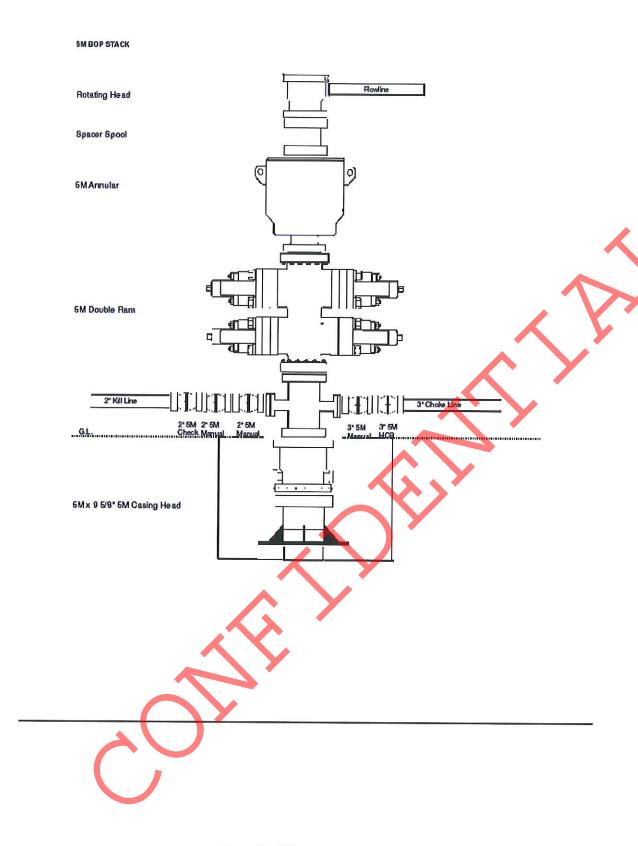
- A. Cores none.
- B. DST none anticipated
- C. Logging Mud logging Intermediate Casing to TD OH Logs: GR-SP-Induction, Neutron Density.
- D. Formation and Completion Interval:
  - Stimulation will be designed for the particular area of interest as encountered.

# 8. <u>Anticipated Abnormal Pressures and Temperatures, Other Potential</u> Hazards

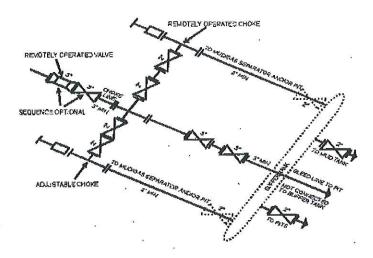
No abnormal temperatures or pressures are anticipated. Maximum anticipated bottom hole pressure equals approximately 5,752 psi. Maximum anticipated bottom hole temperature is 205° F.

H2S has not been encountered in other wells drilled to similar depths in the general area.

QEP ENERGY COMPANY RW 13B4-18C Uintah County, Utah Section 18-T7S-R24E



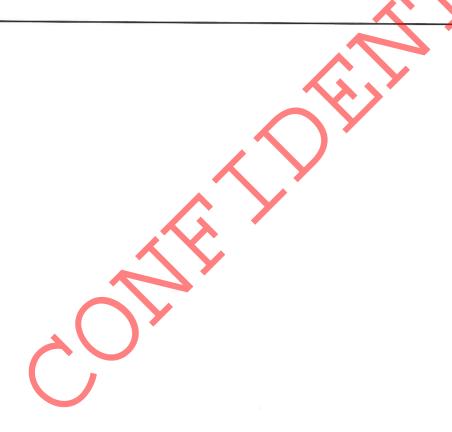
QEP ENERGY COMPANY RW 13B4-18C Uintah County, Utah Section 18-T7S-R24E

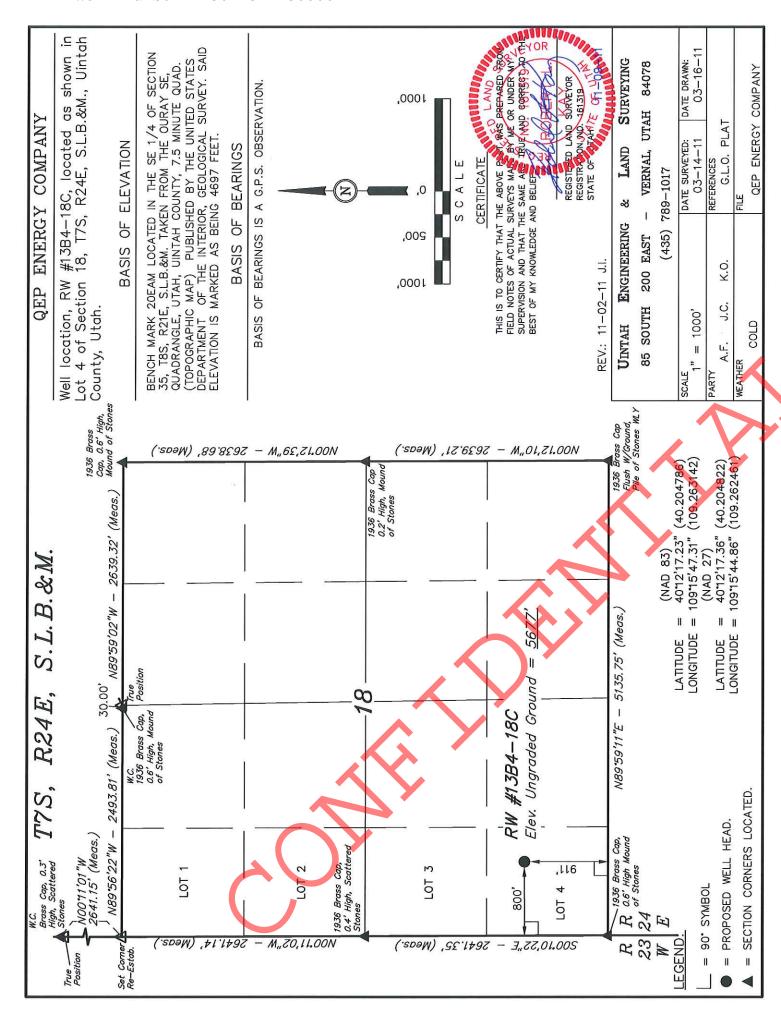


5M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

Abhough ness required for any of the choke manifold systems, buffer tanks are sometimes installed down threats of the choke assistability for the purpose of partifolding the bleed lines together. When buffer tanks are employed, valves shall be installed upstream in installe a follower or multimetion without interrubbility flow comited. Though not shown our 20th 30th 10th QR 550 drawings, it would also be applicable to those shall have.

Siniations. [56 FR 39528, Sept. 27, 1989]





# **QEP ENERGY COMPANY**

RW #13B4-18C

LOCATED IN UINTAH COUNTY, UTAH SECTION 18, T7S, R24E, S.L.B.&M.



PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: SOUTHWESTERLY



PHOTO: VIEW OF EXISTING ACCESS

CAMERA ANGLE: SOUTHWESTERLY

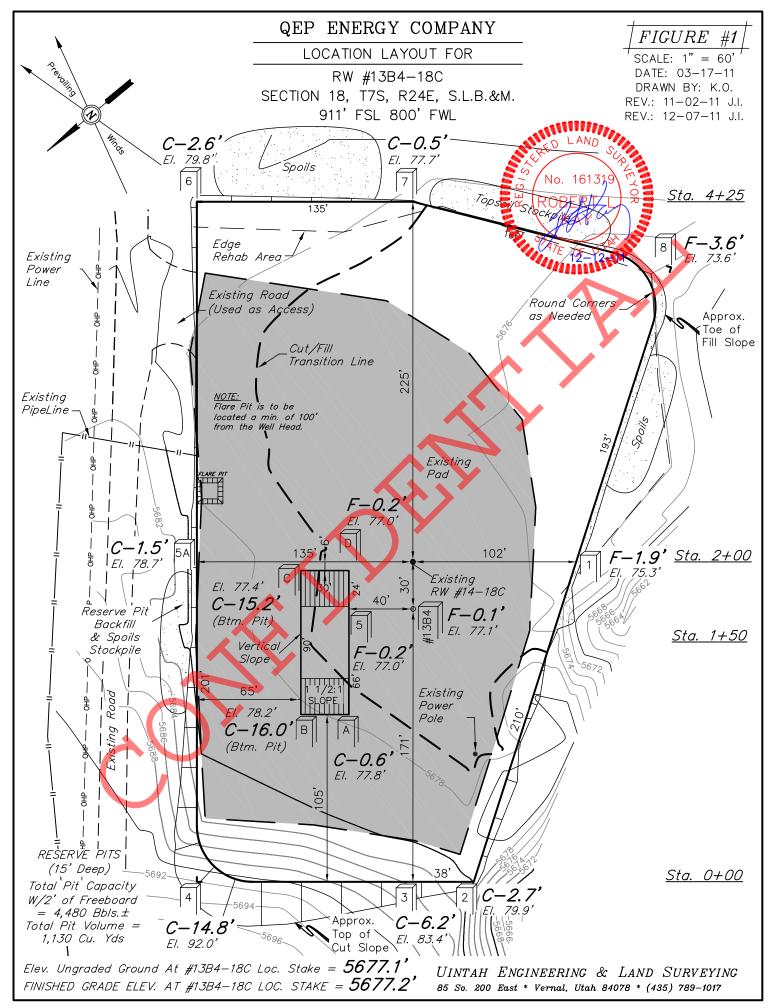


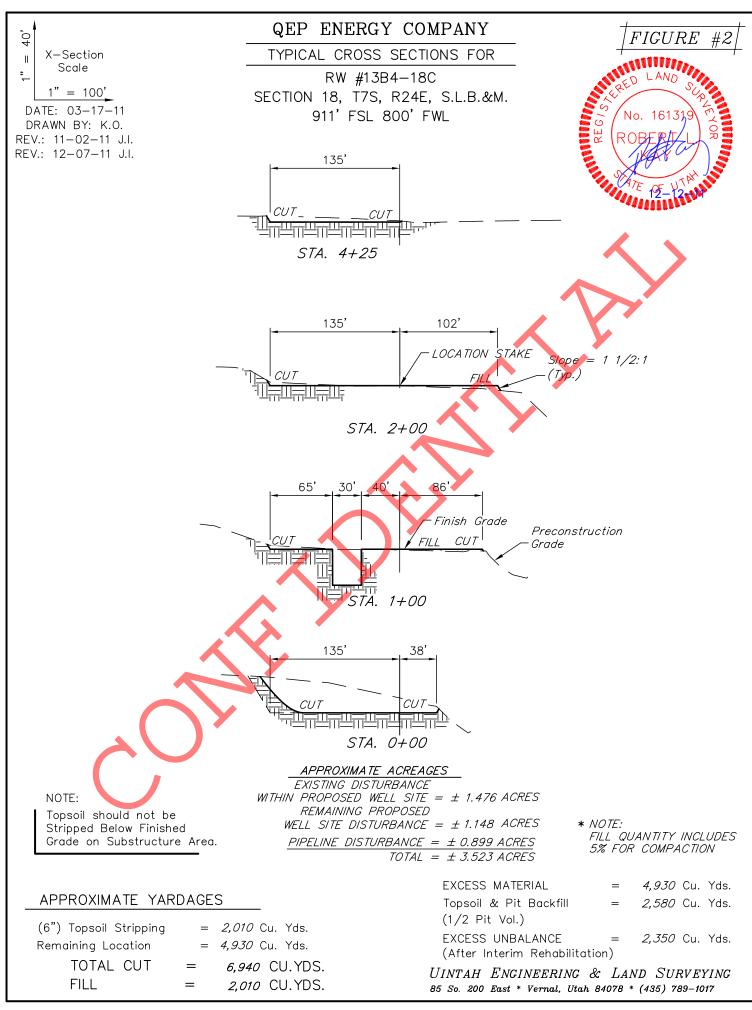
LOCATION PHOTOS

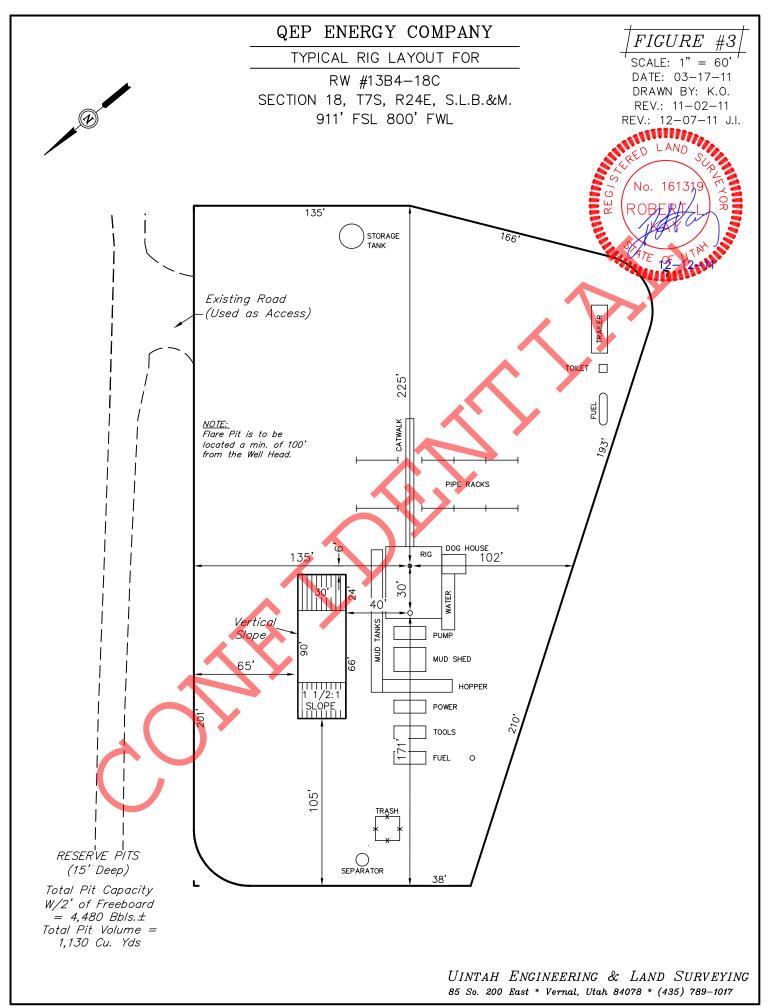
O3 22 11

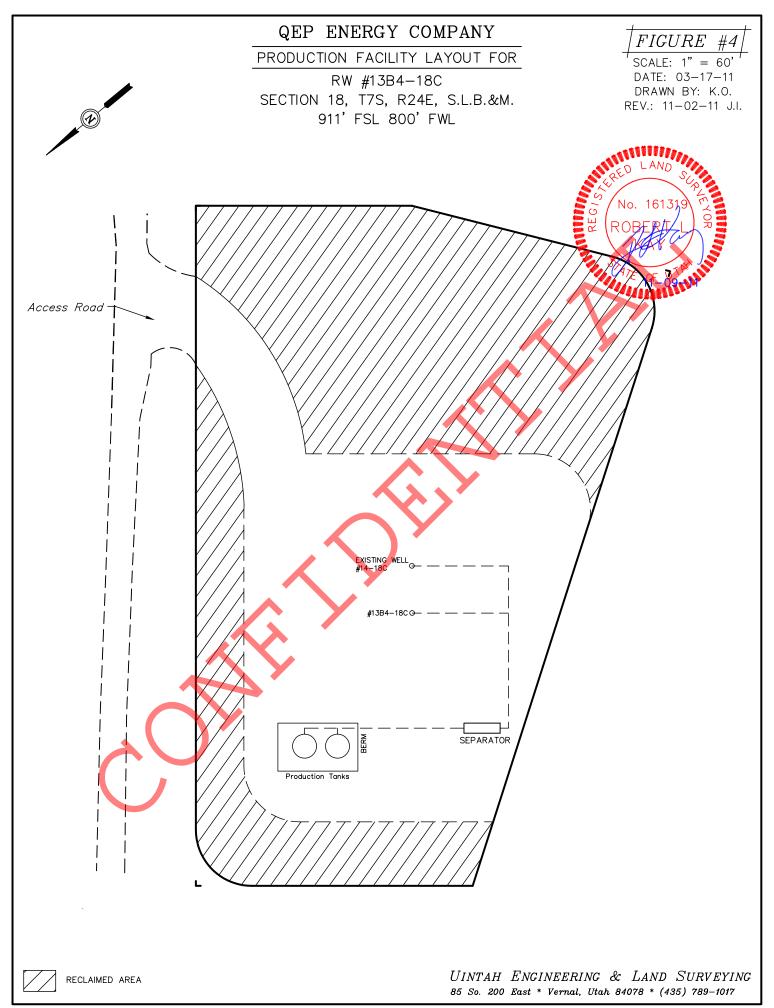
WONTH DAY YEAR

TAKEN BY: A.F. DRAWN BY: J.L.G REV: B.D.H. 11-7-11





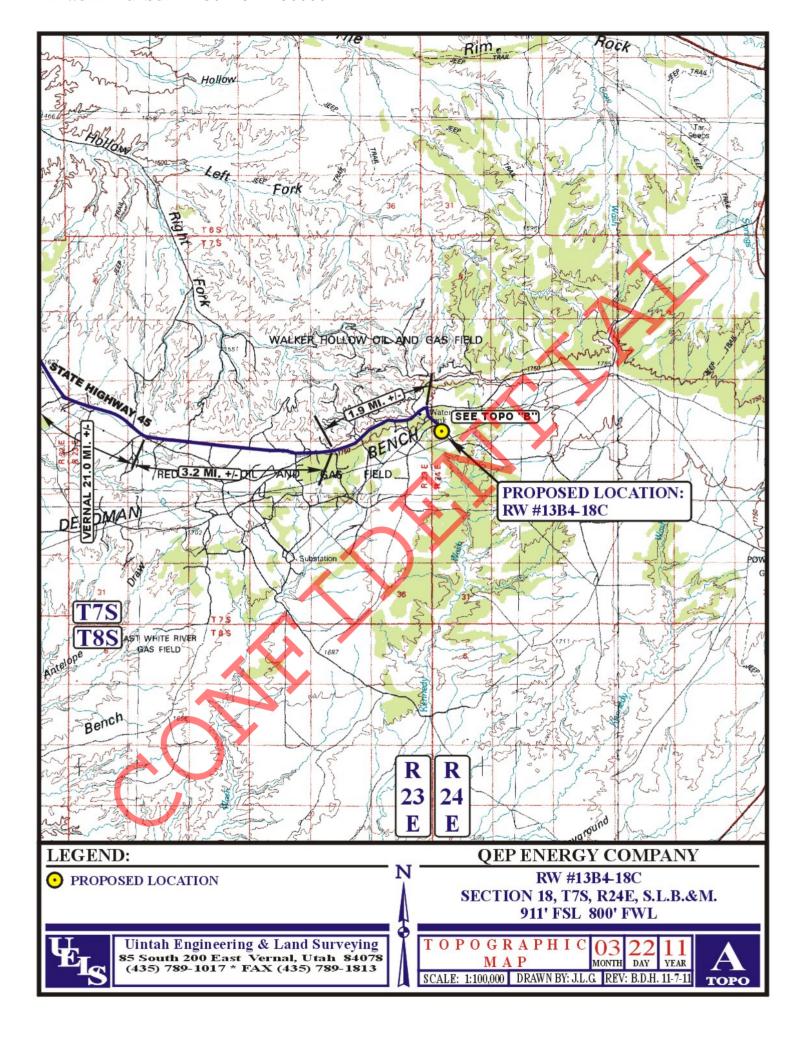


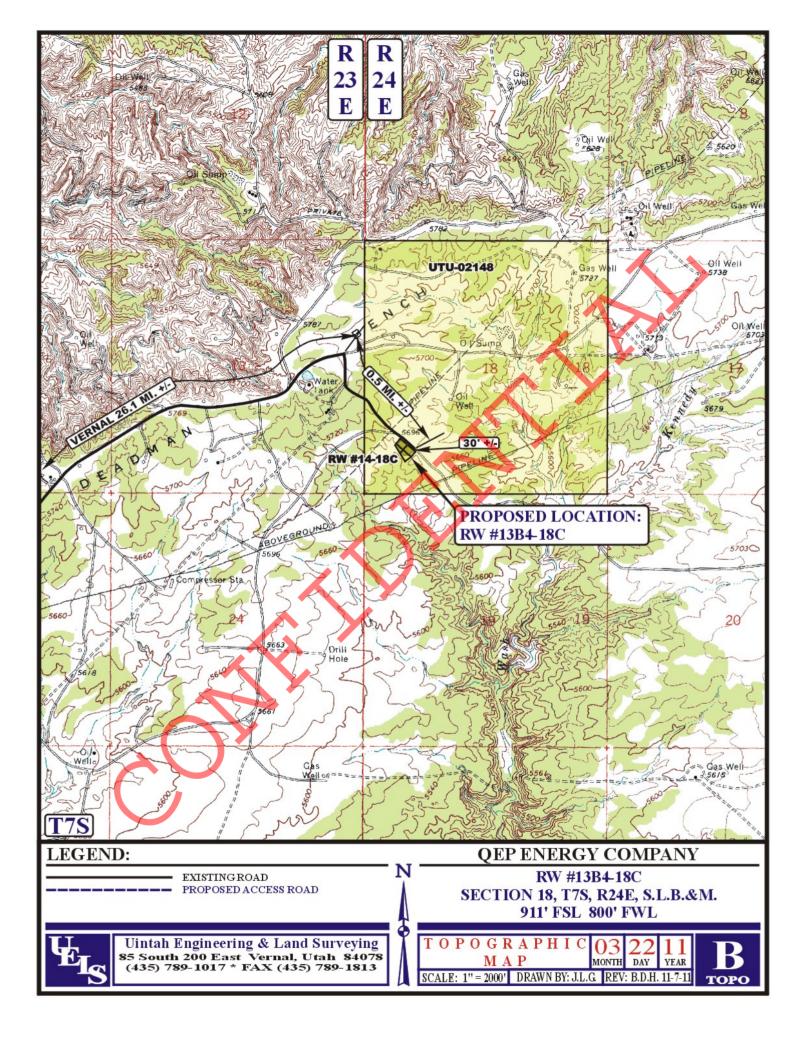


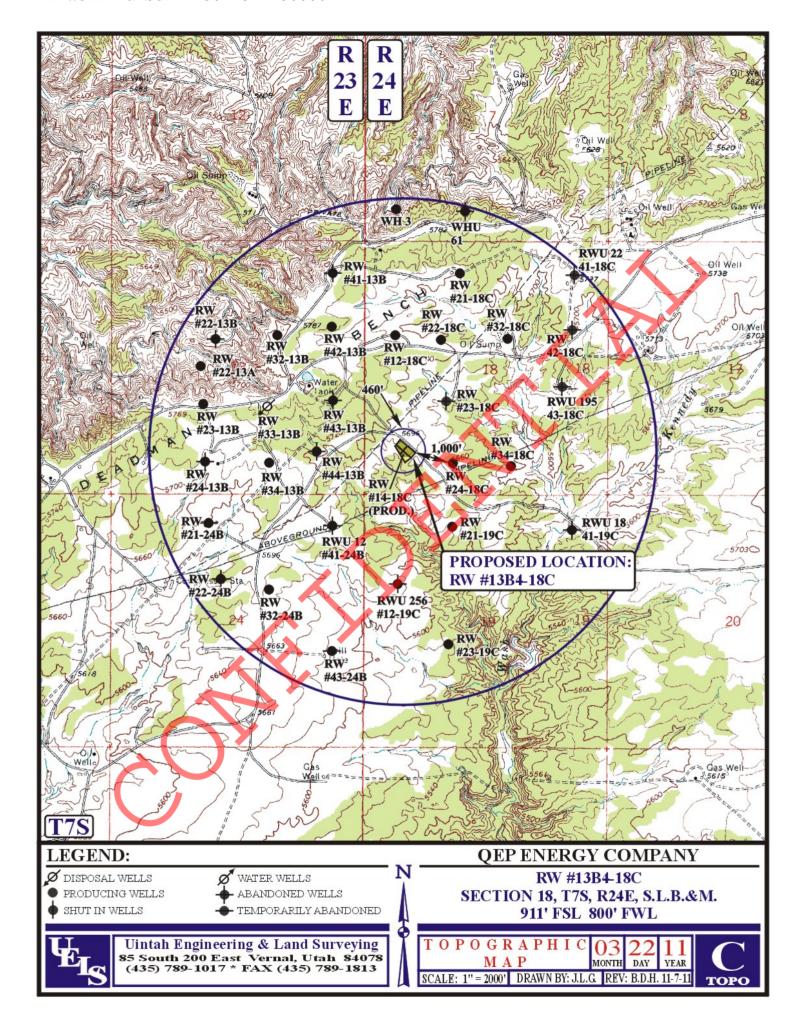
# QEP ENERGY COMPANY RW #13B4-18C SECTION 18, T7S, R24E, S.L.B.&M.

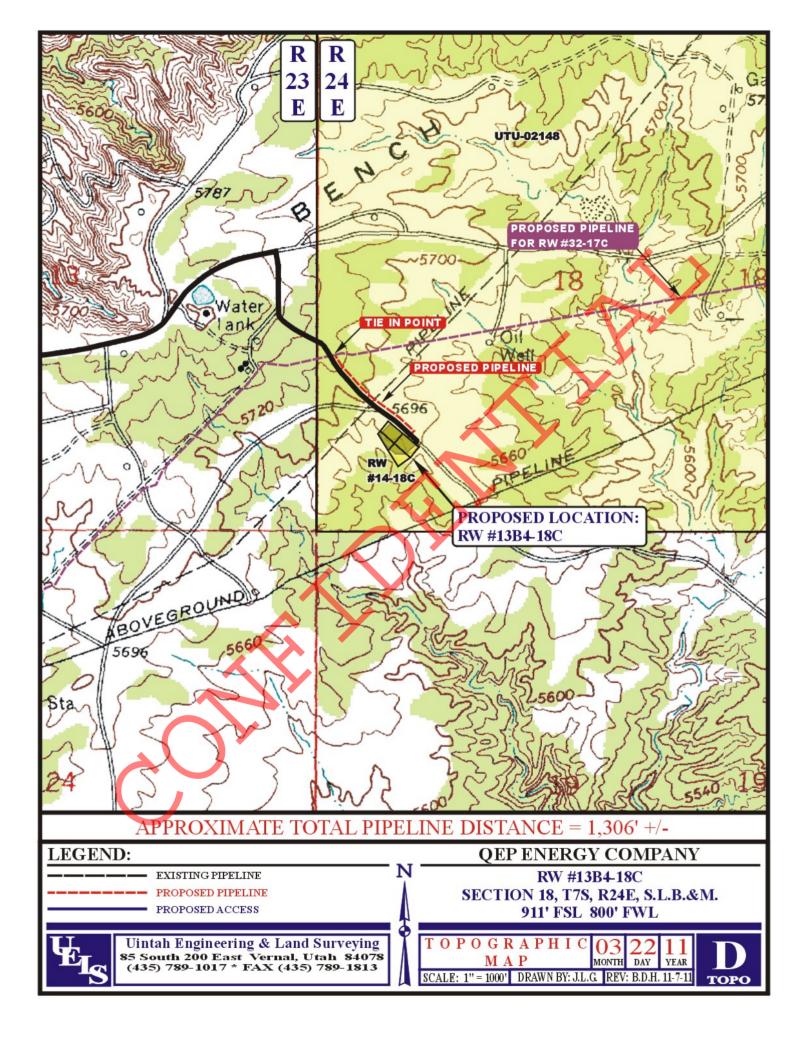
PROCEED IN AN EASTERLY, THEN SOUTHERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 3.9 MILES TO THE JUNCTION OF STATE HIGHWAY 45; EXIT RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.1 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 3.2 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION APPROXIMATELY 1.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY, THE SOUTHEASTERLY DIRECTION APPROWIMATELY 0.5 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN RIGHT AND PROCEED IN A SOUTHWESTERLY DIRECTION APPROXIMATELY 30' TO THE PROPOSED LOCTATION

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 26.6 MILES.









# **QEP ENERGY COMPANY**REFERENCE MAP: AREA OF VEGETATION

#### RW #13B4-18C

LOCATED IN UINTAH COUNTY, UTAH SECTION 18, T7S, R24E, S.L.B.&M.



#### NOTE:

BEGINNING OF REFERENCE AREA UTM NORTHING: 14605861,221 UTM EASTING: 2125744.853 LATITUDE: 40.204244 LONGITUDE: -109.261856

END OF REFERENCE AREA UTM NORTHING: 14605735.785 UTM EASTING: 2125902.502 ATITUDE: 40.203892 LONGITUDE: -109.261300

PHOTO: VIEW FROM BEGINNING OF REFERENCE AREA





Uintah Engineering & Land Surveying 85 South 200 East Vernal, Utah 84078 (435) 789-1017 \* FAX (435) 789-1813

SCALE: 1"	()	5	09	11	
	M(	ONTH	DAY	YEAR	
TAKEN BY: A.F.	DRAWN BY: Z.L		REV	:B.D.H.	11-7-11

REF.

#### **Additional Operator Remarks**

QEP Energy Company proposes to drill a vertical gas well to a depth of 10,535' to test the Mesa Verde Formation. This well is being twinned on well location RW 14-18C. If productive, casing will be run and the well completed. If dry, the well will be plugged and abandoned as per BLM and State of Utah requirements.

Please see Onshore Order No. 1.

Please refer to QEP Energy Company Greater Deadman Bench EIS UT-080-2003-0369V Record of Decision dated March 31, 2008.

Please be advised that QEP Energy Company agrees to be responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

Bond coverage for this well is provided by Bond No.ESB000024. The principal is QEP Energy Company via surety as consent as provided for the 43 CFR 3104.2.



QEP ENERGY COMPANY
RW 13B4-18C
911' FSL 800' FWL
LOT 4, SECTION 18, T7S, R24E
UINTAH COUNTY, UTAH
LEASE # UTU-02148

# ONSHORE ORDER NO. 1 MULTI – POINT SURFACE USE & OPERATIONS PLAN

#### THIS WELL IS BEING TWINNED ON WELL LOCATION RW 14-18C.

An onsite inspection was conducted for the RW 13B4-18C on May 4, 2011. Weather conditions were sunny at the time of the onsite. In attendance at the inspection were the following individuals:

Kevin Sadlier

Aaron Roe

Holly Villa

Daniel Emmett

Jan Nelson

Bureau of Land Management
Bureau of Land Management
Bureau of Land Management
Bureau of Land Management
QEP Energy Company

Stephanie Tomkinson
Ryan Angus
Valyn Davis
Eric Wickersham
QEP Energy Company
QEP Energy Company
QEP Energy Company
QEP Energy Company

Andy Floyd Uintah Engineering & Land Surveying

#### 1. Existing Roads:

The proposed well site is approximately 27 miles South of Vernal Utah.

Refer to Topo Maps A and B for location of access roads within a 2 – mile radius.

All existing roads will be maintained and kept in good repair during all phases of operation.

#### 2. Planned Access Roads:

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

Refer to Topo Map B for the location of the proposed access road.

No new access road is proposed. The access to be used is the access to the existing RW 14-18C location. Graveling or capping the roadbed will be performed as necessary to provide a well constructed safe road. Should conditions warrant, rock, gravel or culverts will be installed as needed.

#### 3. Location of Existing Wells Within a 1 – Mile Radius:

Please refer to Topo Map C.

### 4. Location of Existing & Proposed Facilities:

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

The following guidelines will apply if the well is productive.

A containment dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks). These dikes will be constructed of compacted impervious subsoil; hold 110% of the capacity of the largest tank; and, be independent of the back cut. If a Spill Prevention, Control, and Countermeasure (SPCC) Plan is required by the Environmental Protection Agency, the containment dike may be expanded to meet SPCC requirements with approval by the BLM/VFO AO. The specific APD will address additional capacity if such is needed due to environmental concerns. The use of topsoil for the construction of dikes will not be allowed.

All loading lines will be placed inside the berm surrounding the tank batteries.

All permanent (on site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a color approved by the State.

It was determined on the onsite by the BLM VFO AO that the facilities will be painted Covert Green.

Refer to Topo Map D for the location of the proposed pipeline.

All existing equipment will be moved off location before any construction begins.

The proposed surface pipeline will be constructed utilizing existing disturbed areas to minimize surface disturbance. No construction activities will be allowed outside of the proposed pipeline.

Prior to construction, the Permittee will develop a plan of installation to minimize surface disturbance. Pipe will be strung along the pipeline route with either a flatbed trailer and rubber tired backhoe or a tracked typed side boom. Where surface conditions do not allow the pipe to be strung using conventional methods, the Permittee will utilize pull sections to run the fabricated pipe through the area from central staging areas along the pipeline route.

Upon completion of stringing activities the Permittee will fabricate the pipeline on wooden skids adjacent to the centerline of the pipeline route using truck mounted welding machines. All fabricated piping will be lowered off of the wooden skids and

placed along the centerline. Upon completion of all activities, the wooden skids will be removed from the pipeline route using a flatbed truck or flatbed truck and trailer.

When the surface terrain prohibits the Permittee from safely installing the pipeline along the pipeline route, grading of the route will be required. Prior to installing the pipeline in these areas a plan will be developed to safely install the pipeline while minimizing grading activities and surface disturbances. Additionally, erosion control Best Management Practices will be installed as needed prior to the start of any grading activities. Surface grading will be limited to what is needed to safely install the pipeline. Track type bulldozers and track type backhoes will be utilized for grading activities.

Upon completion of the pipeline installation, the pipeline route will be restored to the pre-disturbance surface contours.

The proposed pipeline will be a surface 10" or smaller, 1,306' in length, containing .90 acres.

#### **Road Crossings**

Fusion Bond or concrete coated pipe will be used for all road crossings to alleviate future corrosion.

All pipe and fittings used for road crossings will be prefabricated within the proposed pipeline route to minimize the duration of open pipe trench across the roadway. Pipe used for road crossings will be isolated on each end with a flange set and insulation kit and cathodically protected with a magnesium type anode. Adequately sized equipment will be used for minor and major road crossings. Depth of cover for minor roads will be >4' and the depth of cover for major roads will be >6'.

Prior to lowering the pipe in the trench, the Permittee will "Jeep" the pipe to locate and repair any Holidays in the pipe coating. Upon lowering the pipe in the trench, 6" of bedding and a minimum of 6" of shading will be installed to protect the pipe using either native soils <1" in diameter or imported sand. Pipe trenches that extend across gravel roads will be backfilled with native soils to within 8" of the driving surface and capped with 3/4" road base. Pipe trenches that extend across asphalt paved roads will be backfilled to 4" of the driving surface with 3/4" road base and capped asphalt material.

### 5. Location and Type of Water Supply:

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

Water for drilling purposes would be obtained from Wonsits Valley Water Right # A 36125 (which was filed on May 7, 1964) or Red Wash Water Right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System.

#### 6. Source of Construction Materials:

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

Surface and subsoil materials in the immediate area will be utilized.

Any gravel will be obtained from a commercial source.

The use of materials under BLM jurisdiction will conform with 43 CFR 3610.2-3.

#### 7. <u>Methods of Handling Waste Materials:</u>

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids including salts and chemicals will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be used at the next drill site or will be removed and disposed of at an approved waste disposal facility within 6 months after drilling is terminated. Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

Unless specified in the site specific APD, the reserve pit will be constructed on the location and will not be located within natural drainages, where a flood hazard exists or surface runoff will or damage the pit walls. The reserve pit will be constructed so that it will not leak, break, or allow discharge of liquids.

It will be determined at the on-site inspection if a pit liner is necessary, the reserve pit will be lined with a synthetic reinforced liner, a minimum of 20 millimeters thick, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place.

No trash or scrap will be disposed of in the pit.

Reserve pit leaks are considered an undesirable event and will be orally reported to the AO.

After first production, produced wastewater will be confined to the approved pit or storage tank for a period not to exceed 90 days.

After the 90 day period, the produced water will be contained in tanks on location and then hauled by truck to one of the following pre-approved disposal sites:

Red Wash Disposal well located in the SESE, Section 28, T7S, R23E, West End Disposal located in the NESE, Section 28, T7S, R22E.

Produced water, oil, and other byproducts will not be applied to roads or well pads for the control of dust or weeds. The dumping of produced fluids on roads, well sites, or other areas will not be allowed.

Any spills of oil, gas, salt water, or other noxious fluids will be immediately cleaned up and removed to an approved disposal site. The spills will be reported to the AO and other authorities as appropriate.

A chemical porta-toilet will be furnished with the drilling rig. The chemical portatoilet wastes will be hauled to Ashley Valley Sewer and Water System for disposal.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. Trash will not be burned on location. All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig. All trash and waste material will be hauled to the Uintah County Landfill.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of wells. Furthermore, extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will not be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completing of wells within these areas. Specific APD's shall address any modifications from this policy.

#### 8. Ancillary Facilities:

None anticipated.

### 9. Well Site Layout: (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram rig orientation, parking areas, and access roads, as well as the location of the following:

The reserve pit.

The stockpiled topsoil (first six inches), will not be used for facility berms. All brush removed from the well pad during construction will be stockpiled with topsoil.

The flare pit or flare box will be located downwind from the prevailing wind direction.

Any drainage that crosses the well location will be diverted around the location by using ditches, water diversion drains or berms. If deemed necessary at the

on-site, erosion drains may be installed to contain sediments that could be produced from access roads and well locations.

A pit liner is required. A felt pit liner will be required if bedrock is encountered.

#### 10. Fencing Requirements:

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

All pits will be fenced according to the following minimum standards:

39 inch net wire will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.

Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

All wire shall be stretched using a stretching device before it is attached to corner posts.

The reserve pit will be fenced on three (3) sides during drilling operations. The fourth side will be put in place when the rig moves off location. The pit will be fenced and maintained until it is backfilled. If drilling operations does not commence within 3 days, the fourth side of the fence will be installed

### 11. Plans for Reclamation of the Surface:

Please refer to QEP Energy Company Uinta Basin Division Reclamation Plan

Site Specific Procedures:

Site Specific Reclamation Summary:

Reclamation will follow Questar Exploration and Production Company, Uinta Basin Division's Reclamation Plan, September 2009 (Questar's Reclamation Plan) and the BLM Green River District Reclamation Guidelines.

All trash and debris will be removed from the disturbed area.

The disturbed area will be backfilled with subsoil.

Topsoil will be spread to an even, appropriate depth and disked if needed.

Water courses and drainages will be restored.

Erosion control devices will be installed where needed.

Seeding will be done in the fall, prior to ground freeze up.

Seed mix will be submitted to a BLM AO for approval prior to seeding.

Monitoring and reporting will be conducted as stated in Questar's Reclamation Plan. A reference site and weed data sheet has been established and are included in this application.

It was determined and agreed upon that there is 7" inches of top soil.

#### 12. <u>Surface Ownership:</u>

Bureau of Land Management 170 South 500 East Vernal, Utah 84078 (435) 781-4400

#### 13. Other Information:

This well is being twinned on well location RW 14-18C.

A Class III archaeological survey was conducted by Montgomery Archaeology Consultants. A copy of this report was submitted on May 9, 2011 **State of Utah Antiquities Project U-11-MQ-0230b** by Montgomery Archaeology Consultants. Cultural resource clearance was recommended for this location.

A Class III paleontological survey was conducted by Intermountain Paleo Consulting. A copy of this report was submitted on May 27, 2011 IPC # 11-33 by Stephen D. Sandau. The inspection resulted in the location of no fossil resources. However, if vertebrate fossil(s) are found during construction a paleontologist should be immediately notified. QEP will provide Paleo monitor if needed.

#### Lessee's or Operator's Representative & Certification:

Valyn Davis Regulatory Affairs Analyst QEP Energy Company 11002 East 17500 South Vernal, UT 84078 (435) 781-4369

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

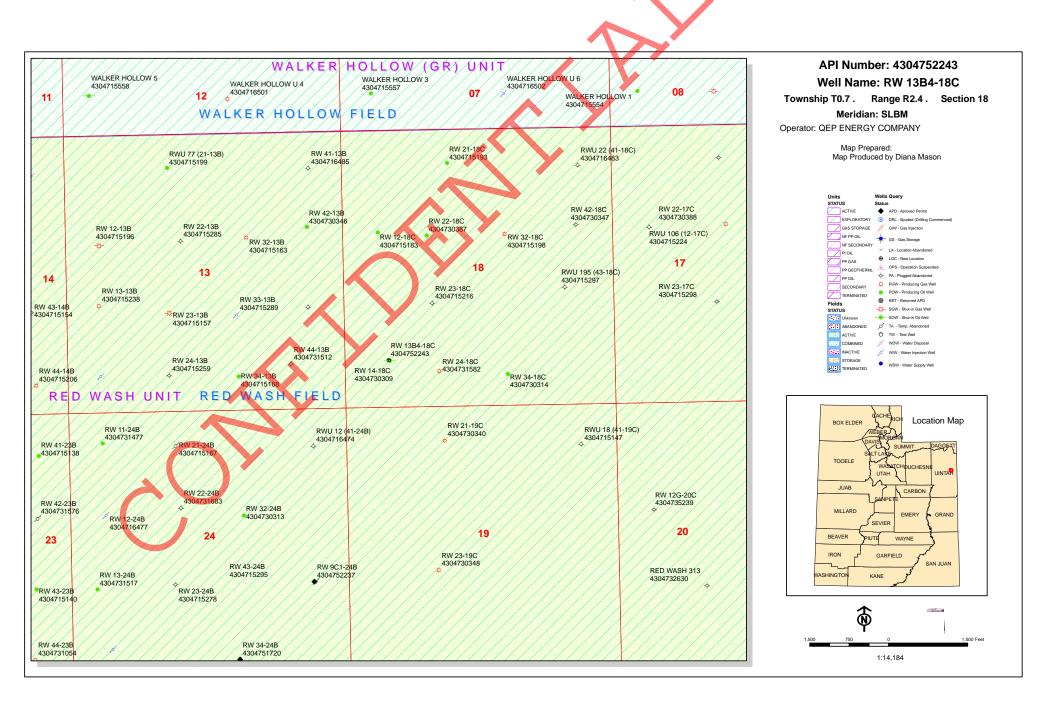
The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

QEP Energy Company is considered to be the operator of the subject well. QEP Energy Company agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104.2 for lease activities is being provided by Bond No. ESB000024

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist, that I have full knowledge of the State and Federal laws applicable to this operations; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

12/14/2011 Valyn Davis Date



## **United States Department of the Interior**

#### BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

January 6, 2012

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2012 Plan of Development Red Wash Unit,

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2012 within the Red Wash Unit, Uintah County, Utah.

API# WELL NAME LOCATION

(Proposed PZ MESA VERDE)

43-047-52242 RW 5D2-26B Sec 26 T07S R23E 2127 FNL 0584 FWL 43-047-52243 RW 13B4-18C Sec 18 T07S R24E 0911 FSL 0800 FWL

This office has no objection to permitting the wells at this time.

Michael L. Coulthard
Dictally signed by Michae

bcc: File - Red Wash Unit

Division of Oil Gas and Mining

Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:1-6-12

# WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 12/14/2011 **API NO. ASSIGNED:** 43047522430000

WELL NAME: RW 13B4-18C

OPERATOR: QEP ENERGY COMPANY (N3700) PHONE NUMBER: 435 781-4369

**CONTACT:** Valyn Davis

PROPOSED LOCATION: SWSW 18 070S 240E Permit Tech Review:

SURFACE: 0911 FSL 0800 FWL Engineering Review:

BOTTOM: 0911 FSL 0800 FWL Geology Review:

COUNTY: UINTAH

LATITUDE: 40.20478 LONGITUDE: -109.26301 UTM SURF EASTINGS: 647829.00 NORTHINGS: 4451932.00

FIELD NAME: RED WASH

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU02148 PROPOSED PRODUCING FORMATION(S): MESA VERDE

SURFACE OWNER: 1 - Federal COALBED METHANE: NO

#### RECEIVED AND/OR REVIEWED:

**₽** PLAT

Bond: FEDERAL - ESB000024

Potash

Oil Shale 190-5

Oil Shale 190-3

Oil Shale 190-13

Water Permit: A-36125/49-2153

RDCC Review:

Fee Surface Agreement

Intent to Commingle

Commingling Approved

LOCATION AND SITING:

R649-2-3.

Unit: RED WASH

R649-3-2. General

R649-3-3. Exception

✓ Drilling Unit

Board Cause No: Cause 187-07

Effective Date: 9/18/2001

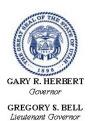
Siting: Suspends General Siting

R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations: 4 - Federal Approval - dmason

API Well No: 43047522430000



## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

### Permit To Drill

\*\*\*\*\*\*

Well Name: RW 13B4-18C API Well Number: 43047522430000

Lease Number: UTU02148 Surface Owner: FEDERAL Approval Date: 1/12/2012

#### Issued to:

QEP ENERGY COMPANY, 11002 East 17500 South, Vernal, Ut 84078

#### Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 187-07. The expected producing formation or pool is the MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

#### **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well contact Carol Daniels at 801-538-5284

(please leave a voicemail message if not available)

OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at http://oilgas.ogm.utah.gov

API Well No: 43047522430000

### Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
  - Report of Water Encountered (Form 7) due within 30 days after completion
  - Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas

# RECEIVED

Form 3160-3 (August 2007)

FEB 15 2012

# RECEIVED

FORM APPROVED OMB No. 1004-0136 Expires July 31, 2010

JUNITED STATES
DEPARTMENT OF THE INTERIOR
DIV. OF CIL, GAS BUNING OF LAND MANAGEMENT

DEC 1 5 2011

Expires July 31, 2010

5. Lease Serial No.

				·	01002140	
1	APPLICATI	ON FOR PERMIT	TO DRILL OR RE	EENTBLM	6. If Indian, Allottee or Tr	ibe Name
1a. Type of Work:	<b>⊠</b> DRILL	REENTER	CONFID	ENTIAL	7. If Unit or CA Agreemen 892000761X	nt, Name and No.
					8. Lease Name and Well N	No.
1b. Type of Well:	Oil Well	Gas Well	Other 🔲 Sing	gle Zone Multiple Zone	RW 13B4-18C	
2. Name of Operator QEP ENERGY	COMPANY	Contac	t: VALYN DAVIS Davis@qepres.com		9. API Well No. 43-047-52	2.43
3a. Address 11002 EAST 179 VERNAL, UT 84		<del></del>	3b. Phone No. (inclu Ph: 435-781-436 Fx: 435-781-439	39	10. Field and Pool, or Exp RED WASH	
4. Location of Well	(Report locati	on clearly and in accor	dance with any State req	uirements.*)	11. Sec., T., R., M., or Blk	c. and Survey or Area
At surface At proposed pro			0.204786 N Lat, 109 0.204786 N Lat, 109		Sec 18 T7S R24E I	Mer SLB
14. Distance in miles 27 MILES +/- S	s and direction f SOUTHEAST	rom nearest town or po OF VERNAL, UTA	NH .		12. County or Parish UINTAH	13. State UT
15. Distance from pr	oposed location	to nearest property or g. unit line, if any)	16. No. of Acres in I	ease	17. Spacing Unit dedicated	d to this well
800'	so to heatest un	g. unit fine, it any)	1262.32		40.00	
18. Distance from pr completed, appli	oposed location	to nearest well, drilling	, 19. Proposed Depth		20. BLM/BIA Bond No. o	n file
+/- 1000'	led for, on this i	ease, It.	10535 MD 10535 TVD		ESB000024	
21. Elevations (Show 5677 GL	whether DF, K	B, RT, GL, etc.	22. Approximate date 04/01/2012	e work will start	23. Estimated duration 30 DAYS	
				achments		
The following, complet	ed in accordanc	e with the requirements	of Onshore Oil and Gas (	Order No. 1, shall be attached to	this form:	
Well plat certified by     A Drilling Plan.     A Surface Use Plan     SUPO shall be file	(if the location i		stem Lands, the office).	4. Bond to cover the operation ltem 20 above). 5. Operator certification 6. Such other site specific in authorized officer.		
25. Signature (Electronic Sub	mission)		Name (Printed/Typed VALYN DAVIS	Ph: 435-781-4369		Date 12/14/2011
Title REGULATORY	AFFAIRS A	NALYST				
Approved by (Signatu	ire)		Name (Printed/Typed	<sup>)</sup> Jerry Kenczka	3	FEB 0 8 2017
Title Assis	tant Field Mar 8 Mineral Res	nager sources	Office VER	RNAL FIELD OFFICE tle to those rights in the subject I	ease which would entitle the a	inplicant to conduct
operations thereon. Conditions of approval,	if any, are attac	hed.	CONDITIO	ONS OF APPROVAL AT	TACHED	
Fitle 18 U.S.C. Section States any false, fictition	1001 and Title us or fraudulent	43 U.S.C. Section 1212 statements or represent	, make it a crime for any ations as to any matter wi	person knowingly and willfully t ithin its jurisdiction.	o make to any department or a	agency of the United

Electronic Submission #125708 verified by the BLM Well Information System
For QEP ENERGY COMPANY, sent to the Vernal
Committed to AFMSS for processing by ROBIN R. HANSEN on 12/27/2011 (12RRH1110AE)

**NOTICE OF APPROVAL** 





### UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT **VERNAL FIELD OFFICE**

**VERNAL, UT 84078** 

(435) 781-4400



### CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Well No: API No:

**QEP Energy Company** 

170 South 500 East

RW 13B4-18C 43-047-52243

Agreement:

Location: Lease No: Lot 4, Sec. 18, T7S, R24E

UTU-02148 Red Wash Unit

**OFFICE NUMBER:** 

(435) 781-4400

**OFFICE FAX NUMBER:** 

(435) 781-3420

### A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit was processed using a 390 CX tied to NEPA approved 03/31/2008. Therefore, this permit is approved for a two (2) year period OR until lease expiration OR the well must be spud by 03/31/2013 (5 years from the NEPA approval date), whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

### NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	_	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	_	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <u>blm_ut_vn_opreport@blm.gov.</u>
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	_	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 2 Well: RW 13B4-18C 2/7/2012

### SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- All new and replacement internal combustion gas field engines of less than or equal to 300 designrated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.
- This project will be implemented on or after the sundry approval date. If the well has not been spudded by March 31, 2013 this sundry will expire and the operator is to cease all operations related to preparing to drill the well.
- Prior to construction, an invasive plants/noxious weeds inventory will be completed for all areas where surface disturbance will occur, and a completed Weed Inventory Form will be submitted to the BLM Authorized Officer.

#### Reclamation

- Reclamation will be completed in accordance with the Questar Exploration and Production Company, Uintah Basin Division's Reclamation Plan on file with the Vernal Field Office of the BLM.
- The operator shall submit a Sundry Notice (Form 3160-5) to the BLM Authorized Officer (AO) 3 growing seasons after reclamation efforts have occurred evaluating the status of the reclaimed areas in order to determine whether the BLM standards set forth in the Green River District Reclamation Guidelines have been met (30% or greater basal cover).

Page 3 of 3 Well: RW 13B4-18C 2/7/2012

### DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

### SITE SPECIFIC DOWNHOLE COAs:

- Production casing cement shall be brought 500' up and into the surface casing.
- For the SR sundry covering drilling operations on the first day (when the surface hole is first drilled), operator shall note in the report the volume of water in units of barrels out on location, stored in pitstanks.
- Electronic/mechanical mud monitoring equipment shall be required, from surface casing shoe to TD, which shall include as a minimum: pit volume totalizer (PVT); stroke counter; and flow sensor.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

#### DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily
  drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order
  No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a
  test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be reported in the driller's
  log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.

Page 4 of 4 Well: RW 13B4-18C 2/7/2012

- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is
  encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal
  Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to BLM\_UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 5 of 5 Well: RW 13B4-18C 2/7/2012

### **OPERATING REQUIREMENT REMINDERS:**

 All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written communication
  and must be received in this office by not later than the fifth business day following the date on
  which the well is placed on production. The notification shall provide, as a minimum, the following
  informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - o Unit agreement and/or participating area name and number, if applicable.
  - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid,

Page 6 of 6 Well: RW 13B4-18C 2/7/2012

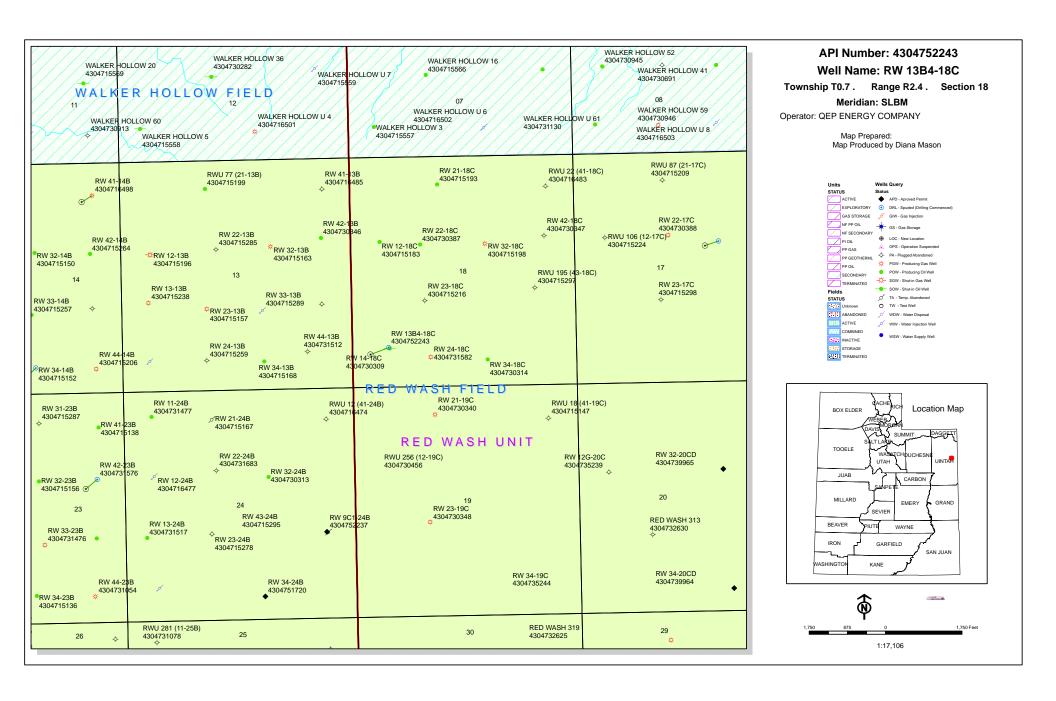
and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

• All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.

- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office
  Petroleum Engineers will be provided with a date and time for the initial meter calibration and all
  future meter proving schedules. A copy of the meter calibration reports shall be submitted to the
  BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid
  hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall
  be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior approval
  of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior
  approval of the BLM Vernal Field Office shall be obtained and notification given before resumption
  of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

	STATE OF UTAH		FORM 9
ι	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MINI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU02148
SUNDR	RY NOTICES AND REPORTS C	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significantly d reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME: RED WASH
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: RW 13B4-18C
2. NAME OF OPERATOR: QEP ENERGY COMPANY			9. API NUMBER: 43047522430000
3. ADDRESS OF OPERATOR: 11002 East 17500 South,		PHONE NUMBER: 308-3068 Ext	9. FIELD and POOL or WILDCAT: RED WASH
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0911 FSL 0800 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	<b>HP, RANGE, MERIDIAN:</b> 18 Township: 07.0S Range: 24.0E Meridi	an: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	acidize [	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN [	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
✓ SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud: 5/23/2012	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
0/20/2012	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
44 DECORIDE BRODOCED OR		OTHER	<u>'</u>
	COMPLETED OPERATIONS. Clearly show all T 90' OF 14" CONDUCTOR PIREADY MIX.		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY June 05, 2012
NAME (DI EASE DDINT)	DUONE NUMBE	R TITLE	
NAME (PLEASE PRINT) Valyn Davis	<b>PHONE NUMBE</b> 435 781-4369	Regulatory Affairs Analyst	
SIGNATURE N/A		<b>DATE</b> 6/4/2012	

	STATE OF UTAH		FORM 9				
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU02148				
SUNDF	RY NOTICES AND REPORTS OF	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
	oposals to drill new wells, significantly dea reenter plugged wells, or to drill horizonta n for such proposals.		7.UNIT or CA AGREEMENT NAME: RED WASH				
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: RW 13B4-18C				
2. NAME OF OPERATOR: QEP ENERGY COMPANY			9. API NUMBER: 43047522430000				
3. ADDRESS OF OPERATOR: 11002 East 17500 South,		HONE NUMBER: 08-3068 Ext	9. FIELD and POOL or WILDCAT: RED WASH				
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0911 FSL 0800 FWL			COUNTY: UINTAH				
QTR/QTR, SECTION, TOWNS	HIP, RANGE, MERIDIAN: 18 Township: 07.0S Range: 24.0E Meridiar	n: S	STATE: UTAH				
11. CHEC	K APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA				
TYPE OF SUBMISSION		TYPE OF ACTION					
	ACIDIZE	ALTER CASING	CASING REPAIR				
NOTICE OF INTENT Approximate date work will start:	✓ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME				
5/22/2012	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE				
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION				
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK				
		RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION				
SPUD REPORT	PRODUCTION START OR RESUME	1					
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON				
	L TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL				
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION				
	WILDCAT WELL DETERMINATION	OTHER	OTHER:				
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  QEP ENERGY COMPANY REQUESTS TO CHANGE THE DRILLING PLAN ON THE ABOVE MENTIONED WELL: THE SURFACE HOLE WILL BE DRILLED WITH AIR, AIR/MIST, FOAM OR MUD DEPENDING ON HOLE CONDITIONS.  DRILLING BELOW SURFACE CASING WILL BE WITH WATER BASED DRILLING FLUIDS CONSISTING PRIMARILY OF FRESH WATER, BENTONITE, LIGNITE, CAUSTIC, LIME, SODA ASH AND POLYMERS. NO CHROMATES WILL BE USED. IT IS NOT INTENDED TO USE OIL IN THE MUD, HOWEVER, IN THE EVENT IT IS USED, OIL CONCENTRATION WILL BE LESS THAN 4% BY VOLUME. MAXIMUM ANTICIPATED MUD WEIGHT IS 9.5 PPG. QEP ENERGY COMPANY REQUESTS TO SET 90' OF 14" CONDUCTOR PIPE. QEP ENERGY COMPANY WOULD LIKE TO OPTIMIZE THE BOTTOM HOLE SPACING OF THE MESA VERDE DEVELOPMENT; THEREFORE, QEP ENERGY COMPANY WOULD LIKE TO DRILL THIS WELL WITH A SMALL STEP OUT OF +/- 449'. BOTTOM HOLE FOOTAGES ARE: 757' FSL, 378' FWL, LOT 4, SEC. 18, T7S, R24E 40.204369 N LAT., 109.264656 W LON. REVISED MD: 10,616'.							
NAME (PLEASE PRINT)	PHONE NUMBER						
Valyn Davis	435 781-4369	Regulatory Affairs Analyst					
SIGNATURE N/A		<b>DATE</b> 5/22/2012					



Sundry Number: 25963 API Well Number: 43047522430000 Well location, RW #13B4-18C, located as shown in Lot 4 of Section 18, T7S, R24E, S.L.B.&M., Uintah BENCH MARK 20EAM LOCATED IN THE SE 1/4 OF SECTION 35, T8S, R21E, S.L.B.&M. TAKEN FROM THE OURAY SE, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4697 FEET. 03-16-11 FIELD NOTES OF ACTUAL SURVEYS MARE BY WE OR UNDER WITH SUPERVISION AND THAT THE SAME ASSET BY WE OR UNDER WITH SAME ASSET OF MY KNOWLEDGE AND BELIEF SURVEYING 84078 DATE DRAWN: QEP ENERGY COMPANY REGISTERED LAND SURVEYOR REGISTRATION MO. 161319 BEARINGS IS A G.P.S. OBSERVATION. 1000, VERNAL, UTAH ENERGY COMPANY PLAT 03-14-11 DATE SURVEYED: BASIS OF ELEVATION OF BEARINGS LAND G.L.O. CERTIFICATE REFERENCES STATE OF 789-1017 CAC Z જ ENGINEERING (435)200, 200 EAST REV: 05-22-12 C.A.G. REV: 11-02-11 J.I. BASIS Х. О. QEP 1000, 9 <u>ာ</u> County, Utah. SOUTH 1000 BASIS COLD UINTAH A.F. 11 85 WEATHER SCALE PARTY 1936 Brass Cap, 0.6' High, Mound of Stones 1936 Brass Cap Flush W/Ground, Pile of Stones WLY LATITUDE = 40'12'17.23" (40.204786) LONGITUDE = 109'15'47.31" (109.263142 2639.21' (Meas.) - M.OI, ZI.OON (NOO.15,28,10 — Ne288, (Weds: 1936 Brass Cap 0.2' High, Mound of Stones NAD 83 (SURFACE LOCATION) NAD 27 (SURFACE LOCATION 2639.32' (Meas.) ENGTH 449.37 S.L.B.&M TABLI S70'00'31"W DIRECTION I LINE LATITUDE = 4012'15.73" (40.204369) LONGITUDE = 109'15'52.76" (109.264656) = 40'12'15.86" (40.204406) = 109'15'50.31" (109.263975) N.89.59.05."W - 5135.75' (Meas., 5677 LINE NAD 83 (TARGET BOTTOM HOLE) NAD 27 (TARGET BOTTOM HOLE)
LATTUDE = 40'12'15.86" (40. True Position 11 30.00, Elev. Ungraded Ground R24E, 00 W.C. 1936 Brass Cap, 0.6' High, Mound of Stones #1384-18C J., 11,65.68N 2493.81' (Meas.) Bottom Hole T7S, SECTION CORNERS LOCATED. RW = PROPOSED WELL HEAD. N89.56,22"W -N00\*11\*01"W 2641.15' (Meas.) R 0.6' High Mound of Stones 1936 Brass Cap, 0.4' High, Scattered Stones Brass Cap, 0.3' High, Scattered Stones 2 3 ,116 LOT LOT LOT LO<sub>1</sub>

2641.14" (Meds.)

Set Corner, Re-Estab.

True Position

M., ZO, 11.00N

800,

5041.35' (Meds.)

\$

3,,22,01,005

ZSZ

90° SYMBOL

11

II 4

EGEND

24



# **QEP ENERGY (UT)**

Red Wash RW 14-18C (RW 13B4-18C) Pad RW 13B4-18C

**Original Hole** 

Plan: Plan ver.0

# **Standard Planning Report**

10 May, 2012





### QEP Resources, Inc.

Planning Report



Database: Company: EDMDB QEP

QEP ENERGY (UT)

Project: Site:

Red Wash

RW 14-18C (RW 13B4-18C) Pad

Well: Wellbore: Design:

RW 13B4-18C Original Hole Plan ver.0

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference: Survey Calculation Method: Well RW 13B4-18C

RKB @ 5693,20usft (FRONTIER 2) RKB @ 5693.20usft (FRONTIER 2)

True

Minimum Curvature

Project

Red Wash

Map System: Geo Datum: Map Zone:

US State Plane 1983

North American Datum 1983

Utah Central Zone

System Datum:

Mean Sea Level

Using geodetic scale factor

Site

RW 14-18C (RW 13B4-18C) Pad

Site Position: From:

Lat/Long

Northing: Easting:

7,251,113.123 usft 2,265,133.125 usft

Latitude: Longitude:

40.204736 -109,263061

Position Uncertainty:

0.00 usft

Slot Radius:

13-3/16 "

Grid Convergence:

1.43

Well

RW 13B4-18C

Well Position

+N/-S +E/-W

18.21 usft -22.50 usft Northing: Easting:

7,251,130.760 usft 2,265,110.177 usft

10.89

Latitude: Longitude:

40,204786 -109.263142

**Position Uncertainty** 

0.00 usft

Wellhead Elevation:

5,677.20 usft

Ground Level:

5,677.20 usft

Wellbore

Original Hole

Magnetics

Model Name

IGRF2010

Sample Date

5/10/2012

Declination (°)

Dip Angle (°)

Field Strength (nT)

52,377

Plan ver.0

Design Audit Notes:

Version:

Phase:

0.00

PLAN

Tie On Depth:

0.00

66,06

Vertical Section: Depth From (TVD) +N/-S +E/-W (usft)

(usft) 0.00

(usft) 0.00

Direction (°) 250.01

easured			Vertical			Dogleg	Build	Turn		
Depth (usft)	Inclination (°)	Azimuth (°)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Rate (°/100usft)	Rate (°/100usft)	Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0,00	0,00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,732.31	14.65	263,54	1,724,36	-10,47	-92,50	2.00	2.00	0.00	263,54	
2,982.77	14.65	263,54	2,934.19	-46.04	-406.67	0.00	0.00	0,00	0.00	
3,959.18	0.00	0.00	3,900.00	-60.00	-530,00	1.50	-1.50	0.00	180.00	
8,162.18	0.00	0.00	8,103.00	-60.00	-530.00	0.00	0.00	0.00	0.00	
8,395,51	3,50	131.00	8,336.19	-64.67	-524.62	1.50	1.50	0.00	131.00	
10,616,47	3.50	131.00	10,553.00	-153,63	-422.29	0.00	0,00	0,00	0,00	



### QEP Resources, Inc.

### Planning Report



Database: Company: Project: EDMDB\_QEP QEP ENERGY (UT)

Red Wash

Site: RW 14-18C (RW 13B4-18C) Pad

Well: RW 13B4-18C
Wellbore: Original Hole
Design: Plan ver.0

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference: Survey Calculation Method: Well RW 13B4-18C

RKB @ 5693,20usft (FRONTIER 2) RKB @ 5693,20usft (FRONTIER 2)

True

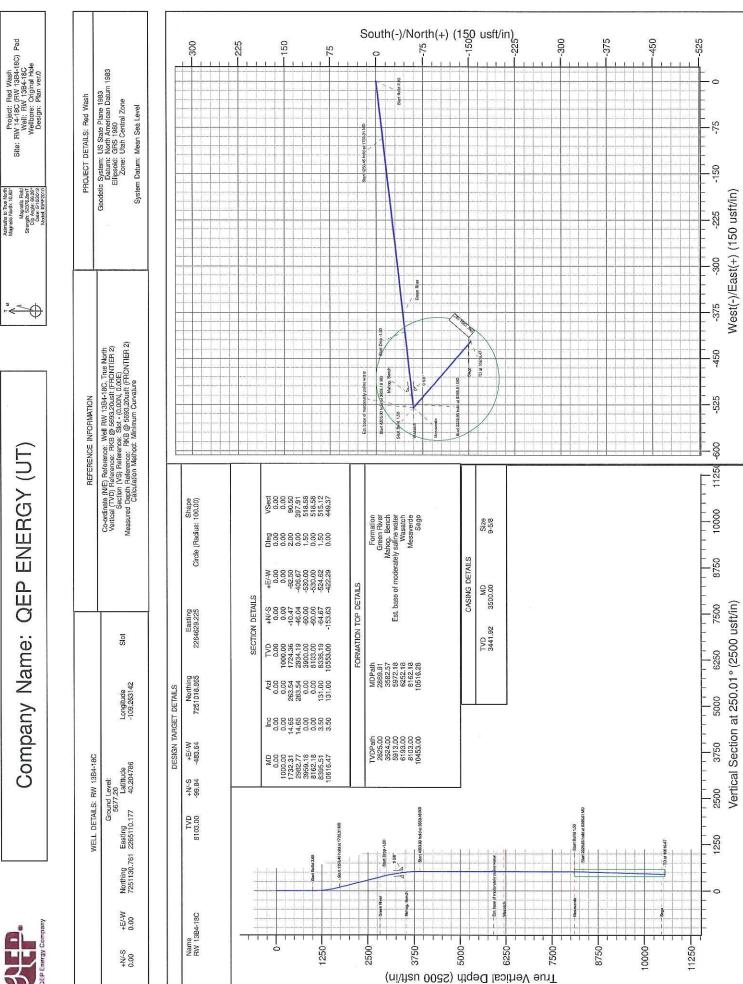
Minimum Curvature

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,732.31	14.65	263.54	1,724.36	-10.47	-92.50	90.50	2.00	2.00	0.00
2,982.77	14.65	263.54	2,934.19	-46.04	-406.67	397.91	0.00	0.00	0.00
3,959.18	0.00	0.00	3,900.00	-60.00	-530.00	518.58	1.50	-1.50	0.00
8,162.18	0.00	0.00	8,103.00	-60.00	-530.00	518.58	0.00	0.00	0.00
8,395.51	3.50	131.00	8,336.19	-64.67	-524.62	515.12	1.50	1.50	0.00
10,616.47	3.50	131.00	10,553.00	-153.63	-422.29	449.37	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir.	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
RW 13B4-18C - plan misses targe - Circle (radius 100		0.00 6usft at 816	8,103.00 4.05usft MD	-99.84 (8104.87 TVE	-483.64 D, -60.00 N, -5	7,251,018.865 330.00 E)	2,264,629.225	40.204512	-109.264873

Casing Points					
	Measured	Vertical		Casing	Hole
	Depth	Depth		Diameter	Diameter
	(usft)	(usft)	Name	O	(")
	3,500.00	3,441.92 9	5/8"	9-5/8	12-1/4

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,869.91	2,825.00	Green River		0.00	
3,582,57	3,524.00	Mahog. Bench		0.00	
5,972.18	5,913.00	Est. base of moderately saline water		0.00	
6,252.18	6,193.00	Wasatch		0.00	
8,162.18	8,103.00	Mesaverde		0.00	
10,516.28	10,453.00	Sego		0.00	





# DIVISION OF OIL, GAS AND MINING

# **SPUDDING INFORMATION**

Name of Company;		QEP E	NERGY (	COMPANY		
Well Name	•	RW 1.	3B4-18C			
Api No:	43-047-522	43	Lea	se Type	FEDERAL	
Section 18	Township_	07S Ran	nge 24E	County	UINTAH	
Drilling Cor	ntractor	FRONTIE	R	R	IG# <b>2</b>	
SPUDDE	D:					
	Date	06/04/2012				
	Time	NOON	<del></del>			
	How	ROTARY				
Drilling wi Commend	ill :e:					
Reported by		LARR	Y BECKE	R		
Telephone #		(435) 8	328-0315			
Date	06/06/2012	Signed	CHD			<u> </u>

# STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM								
Operator:	QEP ENERGY COMPANY		Operator Account Number:	N 3700				
Address:	11002 EAST 17500 SOUTH		— operator / toodant (4 dinpo).					
	city VERNAL		<del>_</del> ·					
	state UT	zip 84078	Phone Number:	(435) 781-4369				

Well 1

API Number	Well	Name	QQ	Sec	Twp	Rng	County
4304752243	RW 13B4-18C		swsw	18	78	24E	UINTAH
Action Code	Current Entity Number	New Entity Number	ŝ	pud Da	ie		iry Assignment ffective Date
В	99999	18478	5	/23/201	12		1/1/2012
Comments: WMM	FD				C(		

Well 2

API Number	Well	Name	QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	<ul> <li>There is should be</li> </ul>	pud Da	<b>G</b>		lity Assignment Effective Date
Comments:					***************************************	<u></u>	The second secon

Well 3

API Number	Well	Name	QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number		pud Daí	e S	<b>E</b> n	tity Assignment Effective Date
Comments:		- Augusta and Augu			<del></del>	<u> </u>	

#### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section)

RECEIVED Regula

Regulatory Affairs Analyst

Valyn Davis

6/4/2012 Date

(5/2000)

JUN 0 6 2012

Sundry Number: 27221 API Well Number: 43047522430000

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU02148
SUNDR	Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significantly reenter plugged wells, or to drill horize n for such proposals.	deepen existing wells below ontal laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: RED WASH
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: RW 13B4-18C
2. NAME OF OPERATOR: QEP ENERGY COMPANY			9. API NUMBER: 43047522430000
3. ADDRESS OF OPERATOR: 11002 East 17500 South,	Vernal, Ut, 84078 30	PHONE NUMBER: 3 308-3068 Ext	9. FIELD and POOL or WILDCAT: RED WASH
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0911 FSL 0800 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SWSW Section:	HP, RANGE, MERIDIAN: 18 Township: 07.0S Range: 24.0E Mer	idian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date from this class.	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
7/1/2012	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
l .	COMPLETED OPERATIONS. Clearly show IENCED PRODUCTION ON J		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY July 03, 2012
NAME (PLEASE PRINT)	PHONE NUMI	BER TITLE	
Valyn Davis	435 781-4369	Regulatory Affairs Analyst	
SIGNATURE N/A		<b>DATE</b> 7/2/2012	

RECEIVED: Jul. 02, 2012

		. •	DEPAR		T <b>ATE (</b> T OF NA			URCES							REPOR	т 🗀	FC	DRM 8
					F OIL,					E	Car.		51	<u> </u>	SIGNATION	AND SE	RIAL NUME	ER:
WELI	L COM	PLET	ION	OR F	RECO	MPL	ETIC	N RI	EPOF	RT AND	LOC	}	6. IF	INDIAN,	ALLOTTEE	OR TRIB	BE NAME	
1a. TYPE OF WELL:	:	OI		(	GAS WELL	]	DRY [		ОТН	ER					AGREEME	NT NAM	E	
b. TYPE OF WORK NEW WELL	C: HORIZ. LATS.	DE EN	EP-		RE- ENTRY	]	DIFF. RESVR.		ОТН	ER			8. V	ÆLL NAM	IE and NUM 3B4-180			
	2. NAME OF OPERATOR: QEP ENERGY COMPANY 9. API NUMBER: 4304752243																	
3. ADDRESS OF OPERATOR: 11002 E. 17500 S. CITY VERNAL STATE UT ZIP 84078 PHONE NUMBER: (435) 781-4369 RED WASH																		
4. LOCATION OF WELL (FOOTAGES)  11. QTR/QTR, SECTION, TOWNSHIP, RANGE,													Ξ,					
SWSW 18 7S 24E																		
AT TOP PRODUCING INTERVAL REPORTED BELOW: 768' FSL, 297' FWL  AT TOTAL DEPTH: 749' FSL, 320' FWL RH ION HAM 12. COUNTY 13. STATE  LIINTAL UTAH																		
		<u> </u>			)HLO	1 1/6	<b>W</b>							JINTA				UTAH
14. DATE SPUDDED 5/23/2012	D:   18	5. DATE T. 6/17/2		HED:	16. DATE	COMPL 0/2012			ABANDON	ED	READY TO	O PRODUC	CE 🔽		vations (D 893 KB	⊮F, RKB,	RT, GL):	
18. TOTAL DEPTH:		595 01	<u> </u>	9. PLUG	BACK T.D		1063	_	20. IF	MULTIPLE CO	OMPLETIO	NS, HOW	MANY? *		TH BRIDGE .UG SET:			
22. TYPE ELECTRIC	TVD 10:		1.75	S RUN (	Submit cop		104( )	<i>e</i> D		23.						TVD		
QUAD COM	22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)  QUAD COMBO, CBL  23.  WAS WELL CORED?  WAS DST RUN?  NO  YES  (Submit analysis)  Submit report)  DIRECTIONAL SURVEY?  NO  YES  (Submit copy)																	
24. CASING AND LI	INER RECORI	D (Report a	all strings	set in w	rell)													
HOLE SIZE	SIZE/GRA	ADE	WEIGHT	(#/ft.)	TOP (	MD)	вотто	M (MD)		EPTH	CEMENT NO. OF		SLUI VOLUM		CEMENT	TOP **	AMOUNT	PULLED
12.25		V-80	40		<u>C</u>		3,5					770						
7.875	4.5 F	-ICI <u>al</u>	11.	Ь	0	'	10,	938	-		G	1,84	78	33	197	<u>′0                                    </u>		
													<u> </u>				-	
		_			<u> </u>							<u>.                                    </u>					<u> </u>	
					<u> </u>							# · · · · · · · · · · · · · · · · · · ·					<del> </del>	
25. TUBING RECOR	RD .												•					
SIZE	DEPTH S	SET (MD)	PACKE	R SET (	MD)	SIZE		DEPTH	SET (MD	) PACKEI	R SET (MD	)	SIZE	D	EPTH SET	(MD)	PACKER S	ET (MD)
2.375	<u> </u>	632										<u> </u>						
26. PRODUCING IN		TOP	(MD)	BOTTO	OM (MD)	TOP	(TVD)	POTTO	M (TVD)	27. PERFO	RATION RI		SIZE	NO. HOL	rel r	DEDEOR	ATION STA	THE
(A) MESA VE		9,8			,704	101	(1 00)	ВОТТО	W (1 VD)	9,849		0,704	.35	144	_		Squeezed	
(B)		, 0,0	7-70	10,	, , , , , ,					0,0,10	- '	7,707	.00	17-	Open		Squeezed	
(C)		<del> </del>													Open	<del>                                      </del>	Squeezed	一
(D)	<del> </del>	<del>                                     </del>													Open	干	Squeezed	一
28. ACID, FRACTUR	RE, TREATME	NT, CEME	NT SQUE	EZE, ET	c.													
DEPTH	INTERVAL							· · · · · · · · · · · · · · · · · · ·	AM	OUNT AND T	YPE OF M	ATERIAL				<del></del>		<del></del>
10588 TO 10	0704		19 B	BL 15	5% KC	L, 569	3 BBL	. SLIC	KWAT	ER, 135	52 SX 3	30/50 8	SAND			-		
10385 TO 10	0495					_				ER, 111								
9849 TO 100	092									ER, 547					r			
29. ENCLOSED AT	TACHMENTS:														3	0. WELL	. STATUS:	
ELECTI	RICAL/MECH/	ANICAL LC	GS					GEOLOG	IC REPOR	т 🔲	DST REPO	RT 🔽	DIREC	TIONAL S	SURVEY		DCM	,

SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION CORE ANALYSIS OPS SUMMARY

PGW

(CONTINUED ON BACK)

AUG 0 9 2012

RECEIVED

#### 31. INITIAL PRODUCTION

#### INTERVAL A (As shown in item #26)

DATE FIRST PE 7/1/2012	ODUCED:	TEST DATE: 7/3/2012		HOURS TESTER	); 24	TEST PRODUCTION RATES: →	OIL - BBL:	GAS – MCF: 638	WATER - BBL: 568	PROD. METHOD: FLOWING
сноке size: <b>25/64</b>	TBG. PRESS. 1,421	CSG. PRESS. <b>2,313</b>	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	N OIL - BBL: 19	GAS MCF: 638	WATER – BBL: 568	INTERVAL STATUS
				INT	ERVAL B (As sho	wn in item #26)				
DATE FIRST PF	ODUCED:	TEST DATE:		HOURS TESTED	D:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	N OIL BBL:	GAS - MCF:	WATER – BBL:	INTERVAL STATUS
				INT	ERVAL C (As sho	wn in item #26)	•			
DATE FIRST PF	RODUCED:	TEST DATE:		HOURS TESTED	D:	TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER BBL:	PROD. METHOD;
CHOKE SIZE:	TBG, PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	N OIL - BBL:	GAS - MCF:	WATER – BBL:	INTERVAL STATUS
				INT	ERVAL D (As sho	wn in item #26)				
DATE FIRST PF	ODUCED:	TEST DATE:		HOURS TESTED	D:	TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	N OIL - BBL:	GAS MCF:	WATER – BBL:	INTERVAL STATUS
32. DISPOSITION SOLD	ON OF GAS (Sold	, Used for Fuel, V	ented, Etc.)	<u> </u>	<b>.</b>			—·•	<b>-1</b>	
33. SUMMARY	OF POROUS ZOI	NES (Include Aqu	ifers):			Į;	34. FORMATION	(Log) MARKERS:		
Show all importa tested, cushion i	ant zones of poros used, time tool ope	ity and contents th en, flowing and sho	ereof: Cored interva ut-in pressures and	als and all drill-stem recoveries,	n tests, including de	epth interval				
Formati	on		ottom (MD)	Descrip	tions, Contents, etc	<b>.</b>		Name	(	Top Measured Depth)
							GREEN R MAHOGAI	VY		2,822 3,521
	l						WASATCH	1		5,945

35. ADDITIONAL REMARKS (Include plugging procedure)

36 I hereby certify that the foregoing and attached informat	ion is complete and correct as determined from all available records.

NAME (PLEASE PRINT) VALYN DAVIS
SIGNATURE VALYN DAVIS

TITLE REGULATORY AFFAIRS ANALYST

8,380

10,843

DATE 8/6/2012

This report must be submitted within 30 days of

- completing or plugging a new well
- · drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

MESA VERDE

**SEGO** 

Send to:

Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

<sup>\*</sup> ITEM 20: Show the number of completions if production is measured separately from two or more formations.

<sup>\*\*</sup> ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

# **Operations Summary Report**

Legal Well Name:

RW 13B4-18C

Common Well Name: RW 13B4-18C

Event Name:

**DRILLING** 

Start:

5/14/2012

Spud Date: 6/1/2012

End:

6/17/2012

Contractor Name: Rig Name:

Frontier Drilling **FRONTIER** 

Rig Release: 6/17/2012

Group:

RIAI	N	ıır	m	hΔ	r.	"
Rig I	A	uı	111	$\sim$	١.	_

Rig Name.		-RONTI	EK			Rig Number: 2
Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
5/30/2012	06:00 - 06:00	24.00	LOC	4	RDMO	RIG DOWN TOP DRIVE, LAY OVER DERRICK, ROLL UP WIRES, READY RIG FOR TRUCKS
5/31/2012	06:00 - 18:00	12.00		3	MIRU	MOVE RIG AND RIG UP WITH TRUCKS. WEST ROC MOVED RIG, 4.2 MILES. MOVE AND RIG UP SUB, MUD TANKS, WATER TANKS, CAMPS, PUMPS AND BACK YARD. RAISE DERRICK AT 1800 HRS.
6/1/2012	18:00 - 06:00 06:00 - 06:00	12.00 24.00		4	MIRU MIRU	RIG UP BY HAND, HANG TOP DRIVE TRACK. RIG UP WITH TRUCKS AND CRANE TILL 10:00. RIG UP BY HAND. RIG UP TOP DRIVE. AND AIR PACKAGE.
6/2/2012	06:00 - 17:00 17:00 - 20:00	11.00 3.00		7	MIRU DRLSUR	RIG UP BY HAND. RIG UP AIR LINES PRE JOB SAFETY MEETING. SAFETY MEETING WITH, CHAD ANTON, MARK KORDUS, GARY LONGHENERY, FLOYD MARTINEZ, MURRAY BECKER, AND PRESION AIR PEOPLE.
						PRE SPUD MEETING WITH CHAD ANTON, MARK KORDUS, FLOYD MARTINEZ, MURRAY BECKER, TOTAL DIRECTIONAL HAND, MWD HAND, TOOLPUSHER, MUD HAND,
	20:00 - 21:30 21:30 - 22:30 22:30 - 23:00 23:00 - 04:30	1.00 0.50	TRP RIG TRP DRL	1 1 1 1	DRLSUR DRLSUR DRLSUR DRLSUR	PJSM, WITH RIG HANDS, TOOLPUSHER, FRONTIER SAFETY HAND, PRESION AIR HANDS, QEP CO. MEN. TEST AIR LINES TO 1500 PSI. FOR 15 MINS. OK. PJSM, PICK UP DIRECTIONAL TOOLS RIG SERVICE CHANGE OUT GRABBER DIES ORIENT DIRECTIONAL TOOLS DRILL FROM 90' TO 475' = 385' FT. @ 70 FPH, 5-15 K ON BIT, PUMPS 2 X 100 SPM, 566 GPM, SPP 1050 PSI, 50 RPM ON TOP DRIVE, 96 RPM MUD MOTOR, MW 8.4 PPG VIS 27
	04:30 - 05:00 05:00 - 06:00		OTH DRL	1	DRLSUR DRLSUR	INSTALL ROTATING RUBBER DRILL FROM 475' TO 621' =146' FT. @ 146 FPH 5-15 K ON BIT PUMPS 2 X 100 SPM, 566 GPM, SPP 1050 PSI, 50 RPM ON TOP DRIVE, 96 RPM MUD MOTOR, MW 8.4 PPG VIS 27
6/3/2012	06:00 - 15:00	9.00	DRL	2 .	DRLSUR	DIRECTIONAL DRILL FROM 621 TO 1462 = 93.4 FPH. 1250 PSI ON 2 PUMPS WITH 110 SPM ON BOTH. 586 GPM, 10-15 WT. ON BIT, 45 RPM ON TOP DRIVE, 100 RPM ON MUD MOTOR,, = 145 TOTAL RPM. 1.83 BEND ON MOTOR, .17 GPR. STARTED KICK OFF AT 850 FT. FIRST SLIDE WAS 20 FT. MOTOR YIELD IS 5.5 DEGREES PER 100 FT. ON FIRST SLIDE.
	15:00 - 16:00 16:00 - 18:00		RIG DRL	1 2	DRLSUR DRLSUR	RIG SERVICE. DIRECTIONAL DRILL FROM 1462 TO 1621 = 79.5 FPH. 1250 PSI ON 2 PUMPS WITH 100 SPM ON BOTH. 566 GPM, 10-15 WT. ON BIT, 30 - 45 RPM ON TOP DRIVE, 96 RPM ON MUD MOTOR,, = 141
	18:00 - 04:00	10.00	DRL	2	DRLSUR	TOTAL RPM. 1.83 BEND ON MOTOR, .17 GPR. DIRECTIONAL DRILL FROM 1621 TO 2508 = 88.7 FPH. 1250 PSI ON 2 PUMPS WITH 100 SPM ON BOTH. 566 GPM, 10-15 WT. ON BIT, 30 - 45 RPM ON TOP DRIVE, 96 RPM ON MUD MOTOR,, = 141 TOTAL RPM. 1.83 BEND ON MOTOR, .17 GPR.

# **Operations Summary Report**

Legal Well Name: RW 13B4-18C Common Well Name: RW 13B4-18C

Event Name:

**DRILLING** 

Start:

5/14/2012

Spud Date: 6/1/2012

End:

6/17/2012

Contractor Name:

Frontier Drilling

Rig Release: 6/17/2012

Group:

Rig Number: 2 Rig Name: **FRONTIER** 

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
6/3/2012	04:00 - 06:00	2.00	DRL	1	DRLSUR	DRILLWITH AIR / WATER, FROM 2508 TO 2695 = 93.5 FPH. 1350 PSI ON 2 PUMPS WITH 85 SPM ON BOTH. 480 GPM,+ CFM-1600=694 GPM 8-12 WT. ON BIT, 30 - 45 RPM ON TOP DRIVE, 118 RPM ON MUD MOTOR,, = 158 TOTAL RPM. 1.83 BEND ON
6/4/2012	06:00 - 06:00	24.00	DRL	2	DRLSUR	MOTOR, .17 GPR.  DRILLWITH AIR / WATER, FROM 2695 TO 3552 = 35.7 FPH.1000 - 1250 PSI ON 2 PUMPS WITH 85 SPM ON BOTH. 480 GPM,+  CFM-1600 - 2600 = 694 GPM 10-20 WT. ON BIT, 30 - 50 RPM ON TOP DRIVE, 118 RPM ON MUD MOTOR,, = 158 TOTAL RPM. 1.83  BEND ON MOTOR, .17 GPR.
6/5/2012	06:00 - 06:30	0.50	DRL	2	DRLSUR	DRILLWITH AIR / WATER, FROM 3552 TO 3600 = 96 FPH.1000 - 1250 PSI ON 2 PUMPS WITH 85 SPM ON BOTH. 480 GPM,+ CFM-1600 - 2600 = 694 GPM 10-20 WT. ON BIT, 30 - 50 RPM ON TOP DRIVE, 118 RPM ON MUD MOTOR,, = 158 TOTAL RPM. 1.83 BEND ON MOTOR, .17 GPR.
	06:30 - 08:30	2.00	CIRC	1	DRLSUR	CIRCULATE BOTTOMS UP X 2 AND SPOT LCM PILL
	08:30 - 09:00		TRP	14	DRLSUR	SHORT TRIP TO CONDUCTOR SHOE.
	09:00 - 16:00		REAM	1	DRLSUR	BACK REAMED FROM 3575 TO 3550, 3450 TO 3420, 3400 TO 3090.
	16:00 - 19:00	3.00	TRP	14	DRLSUR	SHORT TRIP TO CONDUCTOR SHOE.
	19:00 - 20:30	1.50	REAM	1	DRLSUR	BACK REAM FROM 1410 TO 1376
	20:30 - 22:00	1.50	TRP	14	DRLSUR	SHORT TRIP TO CONDUCTOR
	22:00 - 22:30	0.50	OTH		DRLSUR	RIG DOWN AIR JAMMER
	22:30 - 23:30	1.00	RIG	1	DRLSUR	RIG SERVICE RIG AND TOP DRIVE
	23:30 - 01:30	2.00	TRP	14	DRLSUR	TRIP IN HOLE SLOW to 2698
	01:30 - 04:00	2.50	CIRC	1	DRLSUR	PUMP 60 BBL PILL X 4 (WITH 20% LCM) 1 PUMP AT 60 SPM 175GPM 20 RPMS 200 PSI
	04:00 - 06:00	2.00	REAM	1	DRLSUR	WASH TO BOTOM FROM 2698 TO 3350 2 PUMP AT 70 SPM 410 GPM 50 RPM
6/6/2012	06:00 - 11:30		REAM	1	DRLSUR	REAM AND WASH TO BOTTOM FROM 3350 TO 3600. RUNNING 2 PUMPS AT 70 SPM. MIXING LCM, 20% DOWN, GETTING 15% OUT.
	11:30 - 13:00		CIRC	1	DRLSUR	CIRCULATE AT TD. CIRCULATE BOTTOMS UP AND PUMP 2 HIGH VIS, 20% LCM SWEEPS.
	13:00 - 18:30		TRP	2	DRLSUR	TRIP OUT TO RUN SURFACE CASING. BACK REAM 3600 to 3075.
	18:30 - 19:30		TRP	1	DRLSUR	BREAK BIT OFF, LAY DOWN DIRECTIONAL TOOLS, MUD MOTOR ANDSHOCK SUB
	19:30 - 21:30		CSG	1	DRLSUR	PJSM RIG UP CASING CREW AND LAY DOWN TRUCK
	21:30 - 02:00		CSG	2	DRLSUR	PJSM MAKE UP SHOE TRACK TEST SHOE AND FLOAT COLLAR RUN 9 5/8 CASING
	02:00 - 03:30	i	CIRC	1	DRLSUR	FILL CASING AND CIRCULATE BOTTOMS UP @2700 90 SPM 260 GPM LOST 50 BBLS
	03:30 - 04:30		CSG	2	DRLSUR	RUN 9 5/8 CASING
	04:30 - 06:00		CSG	2	DRLSUR	WASH CASING TO BOTTOM
6/7/2012	06:00 - 07:30 07:30 - 11:30	1	CIRC	1 2	CSGSUR CSGSUR	
	11:30 - 15:00	3.50	WOT	1	CSGSUR	
	15:00 - 16:00		CMT	2	CSGSUR	CEMENT, TOP JOB SURFACE. CEMENT W / 170 SKS CEMENT, OR

### **Operations Summary Report**

Legal Well Name:

RW 13B4-18C

Common Well Name: RW 13B4-18C

**Event Name:** 

Start:

5/14/2012

Spud Date: 6/1/2012

**DRILLING** 

End:

6/17/2012

Contractor Name:

Frontier Drilling

Rig Release: 6/17/2012

Group:

Rig Name: Date

6/7/2012

6/8/2012

6/9/2012

**FRONTIER** 

Rig Number: 2

Sub From - To Hours Code Phase **Description of Operations** Code 15:00 - 16:00 1.00 CMT 2 CSGSUR 39 BBLS, CIRCULATED 8 BBLS TO RESERVE PIT, CEMENT WAS DOWN 398 BEFOR TOP JOB. CEMENT DOWN 1600 6/06/2012. 16:00 - 18:00 2.00 WOT CSGSUR WAIT ON CEMENT AFTER TOP JOB. 18:00 - 19:30 1.50 CSG DRLPRO CUTOFF CONDUCTOR AND CASING AND LAY DOWN 19:30 - 22:00 2.50 WHD **DRLPRO** WELD ON WELL HEAD AND TEST 22:00 - 06:00 8.00 BOP DRLPRO 1 PJSM PICK BOPS AND NIPPLE UP CHANGE OUT SPOOL 3.00 BOP 06:00 - 09:00 DRLPRO NIPPLE UP BOP AND BOPE. 1 09:00 - 09:30 0.50 OTH DRI PRO TEST CASING TO 1500 PSI. FOR 30 MINS. 09:30 - 13:30 4.00 BOP DRLPRO 2 PJSM. TEST BOP. TESTED UPPER AND LOWER KELLY VALVE. SAFETY VALVE, DART VALVE, PIPE AND BLIND RAMS, HCR VALVE, CHOKE LINE AND MANIFOLD TO 250 PSI. LOW TEST, 5000 PSI. HIGH TEST. TESTED ANNULAR 250 LOW AND 2500 HIGH PRESSURE. TESTED BY B & C QUICK TEST 13:30 - 14:30 1.00 OTH DRLPRO INSTALL WEAR BUSHING 14:30 - 17:00 2.50 DRL DRLPRO PICK UP BIT, MUD MOTOR, NON-MAG DC, GAP SUB AND ORIENT. 3.00 TRP **DRLPRO** 17:00 - 20:00 2 TRIP IN HOLE. 20:00 - 01:30 5.50 OTH **DRLPRO** PJSM CLEAN CEMENT OUT FLOW LINE 01:30 - 02:30 1.00 DRL 4 DRLPRO DRILL CEMENT, FLOAT COLLAR AND SHOE AND 10' FORMATION 231 GPM 30 RPM DHRPM 48 02:30 - 03:00 0.50 EQT 2 DRLPRO F.I.T. 360 PSI EMW 10.5 PPG W/8.5 PPG 03:00 - 06:00 3.00 DRL DRLPRO DIR. DRILL FROM 3600' TO 3752' = 152 FT. @ 50.6 FPH 15-20 K ON PUMPS 2 X 65 SPM, 376 GPM, 40 RPM ON TOP DRIVE, 73 RPM MUD MOTOR, SLIDE 30' 1/2 HR 122' 2 1/2 HRS 06:00 - 16:00 10.00 DRL 2 **DRLPRO** DIRECTIONAL DRILLING FROM 3752 TO 4579, 82.7 FPH, RUNNING 2 PUMPS AT 80 SPM EACH, 450 GPM, MUD MOTOR IS A HUNTING, 1.5 BEND 7-8 LOBE, 3.5 STAGE, .21 GPR, = 95 RPM, 50 RPM ON TOP DRIVE, 145 TOTAL RPM. RUNNING 12 TO 18 K ON BIT. VIS IS 30, WT. IS 8.8. 16:00 - 16:30 0.50 RIG DRLPRO RIG SERVICE 16:30 - 06:00 13.50 DRL DRLPRO DIRECTIONAL DRILLING FROM 4579 TO 6125, 114.5 FPH, 2 RUNNING 2 PUMPS AT 80 SPM EACH, 450 GPM, MUD MOTOR IS A HUNTING, 1.5 BEND 7-8 LOBE, 3.5 STAGE, .21 GPR, = 95 RPM, 50 RPM ON TOP DRIVE, 145 TOTAL RPM. RUNNING 15-20 K FOR WT. ON BIT. 6/10/2012 06:00 - 15:00 9.00 DRL 2 **DRLPRO** DIRECTIONAL DRILLING FROM 6125 TO 7040. 101.6 FPH. RUNNING 2 PUMPS AT 80 SPM EACH, 450 GPM, MUD MOTOR IS A HUNTING, 1.5 BEND 7-8 LOBE, 3.5 STAGE, .21 GPR, = 95 RPM, 50 RPM ON TOP DRIVE, 145 TOTAL RPM. WE HAVE 38-40 VIS. AND 8.8 - 9.0 MUD WT., 2000 PUMP PRESSURE. 15:00 - 15:30 0.50 RIG **DRLPRO** SERVICE RIG 14.50 DRL 15:30 - 06:00 2 **DRLPRO** DIRECTIONAL DRILLING FROM 7040 TO 8056, 70 FPH, RUNNING 2 PUMPS AT 75 SPM EACH, 440 GPM, MUD MOTOR IS A HUNTING, 1.5 BEND 7-8 LOBE, 3.5 STAGE, .21 GPR, = 92 RPM, 50 RPM ON TOP DRIVE. 143 TOTAL RPM. 6/11/2012 06:00 - 15:00 9.00 DRL 2 DRLPRO DIRECTIONAL DRILLING FROM 8056 TO 8750, 77.1 FPH, RUNNING

# **Operations Summary Report**

Legal Well Name:

RW 13B4-18C

Start:

5/14/2012

Spud Date: 6/1/2012

End:

6/17/2012

Rig Number: 2

Rig Release: 6/17/2012

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
6/11/2012	06:00 - 15:00	9.00	DRL	2	DRLPRO	2 PUMPS AT 75 SPM EACH, 440 GPM, MUD MOTOR IS A HUNTING, 1.5 BEND 7-8 LOBE, 3.5 STAGE, .21 GPR, = 92 RPM, 50 RPM ON TOP DRIVE, 143 TOTAL RPM. THE MUD WT. IS 9.8 AND THE VIS 40, PUMP PSI, IS 2000.
	15:00 - 16:00	1.00	RIG	1	DRLPRO	SERVICE RIG AND TOP DRIVE
	16:00 - 06:00	14.00	DRL	2	DRLPRO	DIRECTIONAL DRILLING FROM 8750 TO 9538, 56,2 FPH, RUNNING

DRLPRO

DRLPRO

DRLPRO

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**DRLPRO** 

DRLPRO

**DRLPRO** 

DRLPRO

EVAL 1

EVAL 1

EVAL 1

EVAL 1

EVAL 1

EVAL 1

**DRLPRO** 

DRLPRO

**DRLPRO** 

1.5 BEND 7-8 LOBE, 3.5 STAGE, .21 GPR, = 92 RPM, 50 RPM ON TOP DRIVE, 143 TOTAL RPM.

DIRECTIONAL DRILLING FROM 9538 TO 9790, 63 FPH, RUNNING 2 PUMPS AT 75 SPM EACH, 440 GPM, MUD MOTOR IS A HUNTING. 1.5 BEND 7-8 LOBE, 3.5 STAGE, .21 GPR, = 92 RPM, 50 RPM ON

2 PUMPS AT 75 SPM EACH, 440 GPM, MUD MOTOR IS A HUNTING.

TOP DRIVE, 143 TOTAL RPM.

CHANGE OUT ROTATING HEAD RUBBER.

DIRECTIONAL DRILLING FROM 9790 TO 10075, 51.8 FPH, RUNNING 2 PUMPS AT 75 SPM EACH, 440 GPM, MUD MOTOR IS A HUNTING, 1.5 BEND 7-8 LOBE, 3.5 STAGE, .21 GPR, = 92 RPM, 50

RPM ON TOP DRIVE, 143 TOTAL RPM.

RIG SERVICE AND LOOK OVER TOP DRIVE

DRLPRO DIRECTIONAL DRILLING FROM 10075 TO 10320, 37.9 FPH, RUNNING 2 PUMPS AT 75 SPM EACH, 440 GPM, MUD MOTOR IS A HUNTING, 1.5 BEND 7-8 LOBE, 3.5 STAGE, .21 GPR, = 92 RPM, 50

RPM ON TOP DRIVE, 143 TOTAL RPM. 20-24 K ON BIT. THE VIS IS

38 AND MY MUD WT. IS 10,35.

PICK UP TO 10,230 CIRCULATE AND CHANGE SAVER SUB DIRECTIONAL DRILLING FROM 10.320 TO 10.521 40.2 FPH, RUNNING 2 PUMPS AT 75 SPM EACH, 440 GPM, MUD MOTOR IS A HUNTING, 1.5 BEND 7-8 LOBE, 3.5 STAGE, .21 GPR, = 92 RPM, 50 RPM ON TOP DRIVE, 143 TOTAL RPM. 20-24 K ON BIT. THE VIS IS

38 AND MY MUD WT. IS 10.35.

DRLPRO DIRECTIONAL DRILLING FROM 10,521 TO 10743, 26.1 FPH, RUNNING 2 PUMPS AT 75 SPM EACH, 440 GPM, MUD MOTOR IS A HUNTING, 1.5 BEND 7-8 LOBE, 3.5 STAGE, .21 GPR, = 92 RPM, 50 RPM ON TOP DRIVE, 143 TOTAL RPM. 20-24 K ON BIT. THE VIS IS

40 AND MY MUD WT. IS 10.5.

SERVICE RIG AND TOP DRIVE.

DIRECTIONAL DRILLING FROM 10,743 TO 10791, 24 FPH, RUNNING 2 PUMPS AT 75 SPM EACH, 440 GPM, MUD MOTOR IS A HUNTING. 1.5 BEND 7-8 LOBE. 3.5 STAGE. .21 GPR. = 92 RPM. 50 RPM ON TOP DRIVE, 143 TOTAL RPM, 20-24 K ON BIT. THE VIS IS

39 AND MY MUD WT. IS 10.5.

CIRCULATE AND CONDITION FOR SHORT TRIP.

BACK REAM F/ 1079I' TO 10361' ( 430') AT 90 SPM WITH ONE PUMP

260 GPMS 55 RPM

PJSM SHORT TRIP TO THE SHOE 3580

PJSM CUT DRILLING LINE

TRIP IN HOLE FILL PIPE EVERY 30 STANDS

PULL DRILLING LINE OFF DRUM AND RESPOOL DRILLING LINE BACK ON DRUM @9374

TRIP IN HOLE TO 10.640 FILL PIPE EVERY 30 STANDS WASH & REAM F/ 10,640' TO 10,791'

PUMP SWEEP, CIRCULATE, SPOT WALLNUT IN OPEN HOLE & MIX

Printed: 8/6/2012 7:26:25 AM

Common Well Name: RW 13B4-18C

**Event Name:** 

DRILLING

Frontier Drilling

4.00 DRL

0.50 OTH

5.50 DRL

1.00 RIG

6.50 DRL

1.50 OTH

5.00 DRL

8.50 DRL

0.50 RIG

2.00 DRL

1.50 CIRC

1.00 REAM

4.00 TRP

1.50 RIG

3.00 TRP

2.00 RIG

1.50 TRP

1.00 REAM

2.00 CIRC

2

2

2

1

2

2

14

14

14

1

1

6

**FRONTIER** 

06:00 - 10:00

10:00 - 10:30

10:30 - 16:00

16:00 - 17:00

17:00 - 23:30

23:30 - 01:00

01:00 - 06:00

06:00 - 14:30

14:30 - 15:00

15:00 - 17:00

17:00 - 18:30

18:30 - 19:30

19:30 - 23:30

23:30 - 01:00

01:00 - 04:00

04:00 - 06:00

06:00 - 07:30

07:30 - 08:30

08:30 - 10:30

6/12/2012

6/13/2012

6/14/2012

Contractor Name:

Rig Name:

### Page 5 of 6

# **QEP ENERGY**

# **Operations Summary Report**

Legal Well Name: RW 13B4-18C Common Well Name: RW 13B4-18C

Event Name: Contractor Name:

DRILLING

Start:

5/14/2012

Spud Date: 6/1/2012

End:

6/17/2012

Frontier Drilling

Rig Name:

**FRONTIER** 

Rig Release: 6/17/2012 Rig Number: 2

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
6/14/2012	08:30 - 10:30		CIRC	1	DRLPRO	SLUG
	10:30 - 20:00	9.50	TRP	14	DRLPRO	FLOW CHECK, PUMP SLUG, P.O.O.H F/WIRE LINE LOGS, SLM,
	20:00 02:00	6.00	100	1	DDI DDO	FLOW CHECK @ SHOE & BHA
	20:00 - 02:00	6.00	LOG	1	DRLPRO	PJSM RIG UP HALLIBURTON LOGGING, RUN TRIPLE COMBO TO 9840, TAG BRIDGE, LOG OUT AND RIG DOWN
	02:00 - 06:00	4 00	TRP	2	DRLPRO	PJSM LAY DOWN DRILL COLLARS, PICK UP BIT & BIT SUB TRIP IN
				-	T.	HOLE FOR CLEAN OUT RUN TO RE LOG
6/15/2012	06:00 - 08:00	2.00	TRP	2	DRLPRO	T.I.H TO 10,641'
	08:00 - 08:30		REAM	1	DRLPRO	WASH & REAM F/10,641' TO 10,791'
	08:30 - 09:30		CIRC	1	DRLPRO	CIRCULATE OUT GAS 3137 UNIT
	09:30 - 11:30	2.00	TRP	14	DRLPRO	BACK REAM F/10/791' TO 10,321' & PULL UP TO 9,750' T.I.H TO 10,791'
	11:30 - 13:00	1.50	TRP	14	DRLPRO	PUMP SWEEP CIRCULATE & RAISE MW TO 10.8+
	13:00 - 14:00		CIRC	1	DRLPRO	PULL 12 STANDS TO 9,657' & T.I.H
	14:00 - 15:30	1.50	CIRC	1	DRLPRO	PUMP SWEEP CIRCULATE & SPOT WALL NUT IN OPEN HOLE MIX
						SLUG FLOW CHECK
	15:30 - 20:00	1	TRP	3	DRLPRO	P.O.O.H TO RUN WIRE LINE LOG
	20:00 - 02:00	6.00	LOG	1	DRLPRO	PJSM RIG UP THRU BIT LOGGERS, RUN OPEN HOLE TRIPLE
	02:00 - 06:00	4.00	TRP	2	DRLPRO	COMBO F/ 10,816 TO 7500, TIE BACK TO HALLIBURTON LOGS
6/16/2012	06:00 - 10:00		TRP	2	DRLPRO	PJSM PICK UP DIRECTIONAL TOOLS, TRIP IN TO DRILL TO 10,900 T.I.H TO 10,685'
0/10/2012	10:00 - 11:00		REAM	1	DRLPRO	WASH & REAM F/10,685' TO 10,791' & CHANGE OUT ROT HEAD
	11:00 - 17:30		DRL	1	DRLPRO	DIRECTIONAL DRILLING FROM 10,791 TO 10936, 22 FPH,
:						RUNNING 2 PUMPS AT 75 SPM EACH, 440 GPM, MUD MOTOR IS A
						HUNTING, 1.5 BEND 7-8 LOBE, 3.5 STAGE, .21 GPR, = 92 RPM, 50
						RPM ON TOP DRIVE, 143 TOTAL RPM. 15-20 K ON BIT. THE VIS IS
	17:00 10:00	0.50	DIO		DDI DDO	40 AND MY MUD WT. IS 11.0.
	17:30 - 18:00 18:00 - 18:30	1	RIG DRL	1	DRLPRO DRLPRO	SERVICE RIG AND TOP DRIVE. DIRECTIONAL DRILLING FROM 10,936 TO 10950, 14 FPH,
	10.00 - 10.50	0.50	DIL	"	DKLFKO	RUNNING 2 PUMPS AT 75 SPM EACH, 440 GPM, MUD MOTOR IS A
						HUNTING, 1.5 BEND 7-8 LOBE, 3.5 STAGE, .21 GPR, = 92 RPM, 50
						RPM ON TOP DRIVE, 143 TOTAL RPM. 15-20 K ON BIT. THE VIS IS
						40 AND MY MUD WT. IS 11.0.
1	18:30 - 19:00		CIRC	1	DRLPRO	CIRCULATE SWEEP OUT FROM CONNECTION
	19:00 - 21:00		TRP	14	DRLPRO	WIPER TRIP 15 STANDS
	21:00 - 23:00		CIRC	1	DRLPRO	CIRCULATE HIGH VIS SWEEP, SPOT WALNUT
	23:00 - 06:00	7.00	TRP	3	DRLPRO	PULL 2 STANDS, LAY DOWN PIPE, PUMP SLUG, CONTINUE LAY DOWN PIPE
6/17/2012	06:00 - 08:00	2.00	TRP	1	DRLPRO	L/D HWDP & DIR TOOLS
	08:00 - 08:30		CSG	1	DRLPRO	PULL WEAR BUSHING
	08:30 - 10:30		CSG	1	DRLPRO	PJSM R/U WEATHERFORD CASING EQUIPMENT
	10:30 - 14:00	3.50	CSG	2	DRLPRO	M/U SHOE, FLOAT & ONE JT. PUMP THRU OK R.I.H W/ 4.5" PRO CASING FILL EVERY 25 JTS.
	14:00 - 14:30	0.50	CIRC	1	DRLPRO	CIRCULATE B/U @ SHOE 3,562'
	14:30 - 16:30	1	CSG	2	DRLPRO	R.I.H W/ 4.5" PRO CASING FILL EVERY 25 JTS.
	16:30 - 17:30		CIRC	1	DRLPRO	CIRCULATE B/U @ 6,488'
	17:30 - 19:00	1.50	CSG	2	DRLPRO	R.I.H W/ 4.5" PRO CASING FILL EVERY 25 JTS.
	19:00 - 20:00		CIRC	1	DRLPRO	CIRCULATE B/U @ 9,000'
	20:00 - 20:30		CSG	2	DRLPRO	R.I.H W/ 4.5" PRO CASING FILL TO 10,000'
	20:30 - 22:00		CIRC	1	DRLPRO	CIRCULATE B/U @ 10,000'
	22:00 - 00:30	2.50	CSG	2	DRLPRO	R.I.H W/ 4.5" PRO CASING FILL TO 10,500', WASH TO BOTTOM
	00:30 - 02:00	1.50	CIRC	1	DRLPRO	TAG BOTTOM AT 10,950 CIRCULATE BOTTOMS UP RIG DOWN CASING CREW. PJSM WITH
	33.33 - 02.30	1.50	00	1.		STATE DOTTONIO OF THE DOWN OFFICE OF THE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OF THE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE OFF

Page 6 of 6

# **Operations Summary Report**

Legal Well Name: RW 13B4-18C Common Well Name: RW 13B4-18C

Event Name:

DRILLING

Start:

5/14/2012

Spud Date: 6/1/2012 End:

6/17/2012

Contractor Name:

Frontier Drilling

Rig Release: 6/17/2012

Group:

Rig Name:

FRONTIER

Rig Number: 2

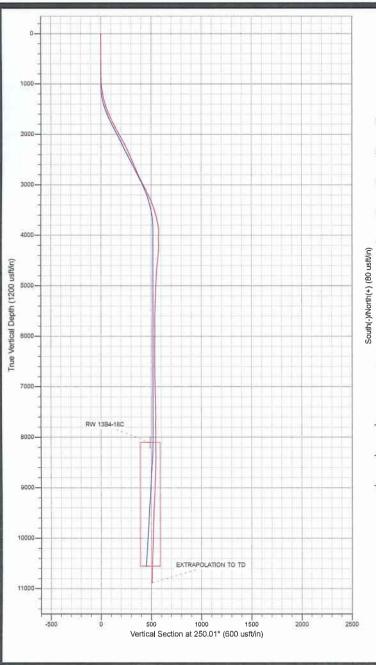
ixig Mairie.		FRONTI				Rig Number. 2
Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
6/17/2012	00:30 - 02:00 02:00 - 06:00		CIRC CMT	1 2	DRLPRO DRLPRO	CEMENTERS PJSM RIG UP CEMENTERS, TEST LINES TO 5000 PSI, PUMP 20 BBL 11.0 PPG TUNED SPACER, PUMP 551.7 BBLS 1050 SKS 11.0 PPG 17.48 GPS WATER 2.95 Y EXTENDACEM LEAD CEMENT, PUMP 232.2 BBL, 790 SKS, 13.0 PPG, 8.19 GPS WATER, 1.65 Y EXPANDACEM TAIL CEMENT, DROP PLUG DISPLACEMENT WITH KCL
6/18/2012	06:00 - 07:00	1.00	СМТ	2	DRLPRO	DISPLACEMENTWITH 169 BBLS KCL, BUMP PLUG @ 3600, FLOATS HELD, 2 BBLS BACK TO TRUCK, 300 BBLS CEMENT TO PIT & R/D HALLIBURTON
	07:00 - 08:00 08:00 - 11:30		BOP CSG	1 7	DRLPRO DRLPRO	FLUSH OUT LINES, BOP WITH SUGAR WATER PJSM R/U WINCHES, NIPPLE DOWN BOP, LIFT STACK, SET SLIPS
	11:30 - 18:00	6.50	LOC	7	DRLPRO	135K, CUT OFF R/D WINCHES   CLEAN MUD PITS & UNPLUG CHOKEMANIFOLD ( RIG RELEASE   @ 18:00HRS 6/17/2012
		:				

RED WASH (UTAH) RW 14-18C (RW13B4-18C) RW 13B4-18C - Slot RW 13B4-18C ORIGINAL WELLBORE

21 June, 2012

**Survey: FINAL SURVEYS** 





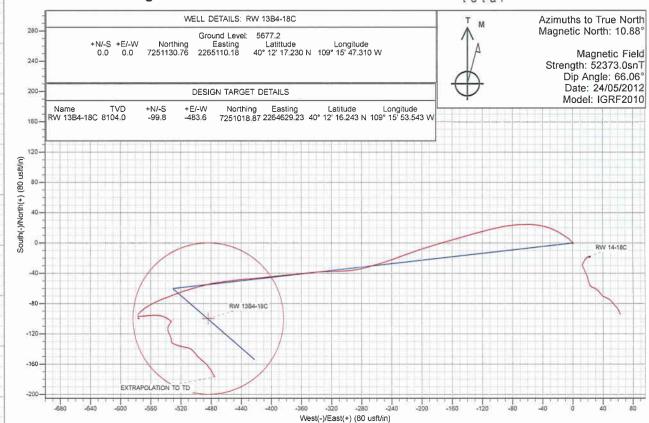
Project: RED WASH (UTAH) Site: RW 14-18C (RW13B4-18C)

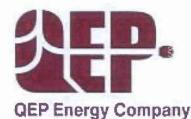
Well: RW 13B4-18C

Wellbore: ORIGINAL WELLBORE

Design: FINAL SURVEYS







ANNOTATIONS Inc Azi +N/-S +E/-W VSect 3.28 144.08 -176.7 -474.9 506.7 Annotation 10882.3 10950.0 EXTRAPOLATION TO TD



Company:

**QEP ENERGY** 

Project.

RED WASH (UTAH)

Site:

RW 14-18C (RW13B4-18C)

Well:

RW 13B4-18C

FINAL SURVEYS

Wellbore:

Design:

ORIGINAL WELLBORE

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

**Survey Calculation Method:** Database:

Well RW 13B4-18C - Slot RW 13B4-18C

KB @ 5694.2usft (FRONTIER 2) KB @ 5694.2usft (FRONTIER 2)

True

Minimum Curvature

EDM\_5000\_1\_7

**Project** 

RED WASH (UTAH)

Map System: Geo Datum: Map Zone:

US State Plane 1983

North American Datum 1983 Utah Central Zone

System Datum:

Mean Sea Level

Using geodetic scale factor

Site

RW 14-18C (RW13B4-18C)

Site Position:

7,251,130.76 usft

From:

Мар

Easting:

2,265,110.18 usft

Longitude:

109° 15' 47.310 W

**Position Uncertainty:** 

0.0 usft

Slot Radius:

13-3/16"

**Grid Convergence:** 

1.43°

Well **Well Position** 

+N/-S +E/-W

0.0 usft

Northing:

7,251,130.76 usfl

Latitude:

40° 12' 17.230 N

109° 15' 47.310 W

**Position Uncertainty** 

0.0 usft 0.0 usft

RW 13B4-18C - Slot RW 13B4-18C

Easting: Wellhead Elevation: 2,265,110.18 usfl

10.88

Longitude: **Ground Level:** 

66.06

5,677.2 usft

Wellbore

ORIGINAL WELLBORE

IGRF2010

FINAL SURVEYS

**Magnetics** 

**Model Name** 

Sample Date

24/05/2012

Declination (°)

Dip Angle (°)

Field Strength

(nT)

Design

**Audit Notes:** 

Version:

1.0

Phase:

ACTUAL

Tie On Depth:

0.0

Vertical Section:

Depth From (TVD) (usft)

0.0

+N/-S (usft)

0.0

+E/-W (usft) 0.0

Direction

(°) 250.01

Survey Program From (usft)

Date 21/06/2012

To. (usft)

Survey (Wellbore)

**Tool Name** 

Description

144.0

10,950.0 FINAL SURVEYS (ORIGINAL WELLBORI MWD

MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	5,694.2	0.0	0.0	0.0	0.00	0.00	0.00
144.0	0.13	322.19	144.0	5,550.2	0.1	-0.1	0.0	0.09	0.09	0.00
233.0	0.26	345.74	233.0	5,461.2	0.4	-0.2	0.1	0.17	0.15	26.46
320.0	0.40	311.29	320.0	5,374.2	8.0	-0.5	0.2	0.27	0.16	-39.60
410.0	0.57	313.31	410.0	5,284.2	1.3	-1.1	0.5	0.19	0.19	2.24
501.0	0.35	309.53	501.0	5,193.2	1.8	-1.6	0.9	0.24	-0.24	-4.15
589.0	0.53	313.40	589.0	5,105.2	2.2	-2.1	1.2	0.21	0.20	4.40
682.0	0.31	314.19	682.0	5,012.2	2.7	-2.6	1.5	0.24	-0.24	0.85
775.0	0.70	344.20	775.0	4,919.2	3.4	-2.9	1.6	0.49	0.42	32.27
864.0	1.58	318.41	864.0	4,830.2	4.9	-3.9	2.0	1.12	0.99	-28.98
923.0	2.68	306.19	922.9	4,771.3	6.3	-5.5	3.1	2.01	1.86	-20.71
1,018.0	3.52	302.24	1,017.8	4,676.4	9.2	-9.8	6.1	0.91	0.88	<del>-4</del> .16
1,114.0	6.50	300.22	1,113.4	4,580.8	13.5	-17.0	11.4	3.11	3.10	-2.10



Company: Project:

QEP ENERGY

RED WASH (UTAH)

Site:

RW 14-18C (RW13B4-18C)

Well:

RW 13B4-18C

Wellbore:

ORIGINAL WELLBORE

Design:

FINAL SURVEYS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method: Database:

Well RW 13B4-18C - Slot RW 13B4-18C

KB @ 5694.2usft (FRONTIER 2) KB @ 5694.2usft (FRONTIER 2)

True

Minimum Curvature EDM\_5000\_1\_7

Survey	Maria Maria	Manusch von der State der Geben der State der			ero and more more an incident policy of the second		one in antique of the second o			
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,209.0 1,305.0	7.60 8.17	294.06 281.76	1,207.7 1,302.8	4,486.5 4,391.4	18.7 22.7	-27.4 -39.8	19.3 29.7	1.40 1.85	1.16 0.59	-6.48 -12.81
1,400.0	9.54	272.27	1,396.7	4,297.5	24.4	-54.3	42.7	2.10	1.44	-9.99
1,496.0	10.77	266.64	1,491.2	4,203.0	24.2	-71.2	58.7	1.65	1.28	-5.86
1,591.0	11.73	261.19	1,584.3	4,109.9	22.2	-89.6	76.6	1.51	1.01	-5.74
1,686.0 1,781.0	13.05 14.19	255.22 254.51	1,677.1 1,769.4	4,017.1 3,924.8	18.0 12.1	-109.5 -131.1	96.8 119.1	1.93 1.21	1.39 1.20	-6.28 -0.75
1,876.0	14.58	254.51	1,861.5	3,832.7	5.8	-153.9	142.6	0.41	0.41	0.00
1,971.0	15.64	253.63	1,953.2	3,741.0	-1.0	-177.7	167.3	1.14	1.12	-0.93
2,065.0	15.69	252.38	2,043.7	3,650.5	-8.4	-202.0	192.7	0.36	0.05	-1.33
2,160.0	15.64	248.80	2,135.2	3,559.0	-16.9	-226.2	218.3	1.02	-0.05	-3.77
2,256.0	14.33	252.05	2,227.9	3,466.3	-25.2	-249.5	243.1	1.62	-1.36	3.39
2,351.0 2,446.0	13.71 13.27	254.71 263.04	2,320.1 2,412.5	3,374.1 3,281.7	-31.8 -36.1	-271.6 -293.2	266.1 287.9	0.94 2.10	-0.65 -0.46	2.80 8.77
2,446.0	12.39	270.60	2,412.5	3,201.7 3,189.1	-36.1 -37.3	-293.2 -314.3	308.1	1.99	-0. <del>46</del> -0.93	7.96
2,636.0	12.30	266.03	2,597.9	3,096.3	-37.9	-334.5	327.4	1.03	-0.99	-4.81
2,731.0	12.56	263.30	2,690.7	3,003.5	-39.8	-354.9	347.1	0.68	0.27	-2.87
2,826.0	13.27	264.97	2,783.3	2,910.9	-42.0	-376.0	367.7	0.84	0.75	1.76
2,920.0	14.19	263.04	2,874.6	2,819.6	-44.3	-398.2	389.4	1.09	0.98	-2.05
3,015.0	14.94	265.50	2,966.5 3,058.3	2,727.7 2.635.9	-46.7	-422.0	412.5	1.02	0.79	2.59
3,110.0 3,205.0	15.03 14.85	263.92 260.75	3,056.3	2,635.9 2,544.1	-49.0 -52.2	-446.4 -470.7	436.3 460.2	0.44 0.88	0.09 -0.19	-1.66 -3.34
3,300.0	12.61	255.13	3,242.4	2,451.8	-56.9	-492.7	482.5	2.74	-2.36	-5.92
3,396.0	10.94	253.28	3,336.3	2,357.9	-62.2	-511.6	502.0	1.78	-1.74	-1.93
3,490.0	10.37	247.39	3,428.7	2,265.5	-68.0	-527.9	519.4	1.31	-0.61	-6.27
3,538.0 3,676.0	9.88 7.78	250.38 244.32	3,476.0 3,612.3	2,218.2 2,081.9	-71.0 -79.1	-535.8 -555.4	527.8 548.9	1.50 1.66	-1.02 -1.52	6.23 -4.39
3,770.0	6.33	236.58	3,705.6	1,988.6	-84.7	-565.4	560.3	1.84	-1.54	-8.23
3,867.0	5.09	226.92	3,802.1	1,892.1	-90.6	-573.1	569.5	1.61	-1.28	-9.96
3,962.0	3.12	197.21	3,896.9	1,797.3	-95.9	-576.9	574.9	2.99	-2.07	-31.27
4,058.0	2.11	135.22	3,992.8	1,701.4	-99.7	-576.4	575.8	2.95	-1.05	-64.57
4,152.0	1.09	8.24	4,086.8	1,607.4	-100.0	-575.1	574.6	3.08	-1.09	-135.09
4,246.0	1.98	292.92	4,180.8	1,513.4	-98.5	-576.4	575.4 575.0	2.13	0.95	-80.13
4,341.0 4,437.0	1.95 3.25	75.25 86.11	4,275.8 4,371.7	1,418.4 1,322.5	-97.4 -96.8	-576.4 -572.1	575.0 570.7	3.92 1.44	-0.03 1.35	149.82 11.31
4,534.0	2.99	84.18	4,468.5	1,225.7	-96.4	-566.8	565.6	0.29	-0.27	-1.99
4,626.0	2.68	86.99	4,560.4	1,133.8	-96.0	-562.3	561.3	0.37	-0.34	3.05
4,721.0	2.20	85.06	4,655.3	1,038.9	-95.8	-558.3	557.4	0.51	-0.51	-2.03
4,816.0	1.80	87.78	4,750.3	943.9	-95.5	-555.0	554.2	0.43	-0.42	2.86
4,910.0	1.71	93.76	4,844.2	850.0	-95.6	-552.1	551.5	0.22	-0.10	6.36
5,004.0 5,099.0	1.63 1.49	93.94 96.40	4,938.2 5,033.1	756.0 661.1	-95.8 -96.0	-549.4 -546.8	549.0 546.6	0.09 0.16	-0.09 -0.15	0.19 2.59
5,194.0	1.36	110.81	5,128.1	566.1	-96.5	-544.5	544.7	0.40	-0.14	15.17
5,288.0	1.49	113.10	5,222.1	472.1	-97.4	-542.3	543.0	0.15	0.14	2.44
5,383.0	1.63	115.65	5,317.0	377.2	-98.5	-540.0	541.1	0.16	0.15	2.68
5,477.0 5,572.0	1.71 1.63	121.53 124.70	5,411.0 5,506.0	283.2 188.2	-99.8 -101.3	-537.6 -535.3	539.3 537.6	0.20 0.13	0.09 -0.08	6.26 3.34
5,667,0	1.76	125.05	5,600.9	93.3	-102.9	-532.9	536.0	0.14	0.14	0.37
5,762.0	0.22		5,695.9	-1.7	-102.3	-531.9	535.3	2.07	-1.62	164.03
5,856.0	0.35	271.21	5,789.9	-95.7	-103.7	-532.4	535.8	0.15	0.14	-10.29
5,951.0	0.35		5,884.9	-190.7	-103.6	-533.0	536.2	0.13	0.00	21.16
6,046.0	0.22		5,979.9	-285.7	-103.3	-533.2	536.4	0.34	-0.14	66.83
6,140.0	0.13	72.93	6,073.9	-379.7	-103.1	-533.2	536.3	0.25	-0.10	83.12



Company: Project: QEP ENERGY

1 10,00

RED WASH (UTAH) RW 14-18C (RW13B4-18C)

> 147.64 154.76

148.25

144.08

10,664.6

10,759.5

10,834.4

10,882.3

-4,970.4

-5,065.3

-5,140.2

-5,188.1

2.63

2.64

3.03

3.28

**EXTRAPOLATION TO TO** 

10,732.0

10,827.0

10,902.0

10,950.0

Site:

RW 13B4-18C

Wellbore: Design:

ORIGINAL WELLBORE FINAL SURVEYS

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well RW 13B4-18C - Slot RW 13B4-18C

0.25 0.34

0.67

0.71

0.11

0.01

0.52

0.52

5.01

7.49

-8.68

-8.69

KB @ 5694.2usft (FRONTIER 2) KB @ 5694.2usft (FRONTIER 2)

True

Minimum Curvature EDM 5000\_1\_7

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Measured Depth (usft)	inclination (°)	Azimuth	Vertical Dépth (usft):	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usfi
6,235.0	0.00	100.88	6,168.9	-474.7	-103.0	-533.1	536.2	0.14	-0.14	0.0
6,329.0	0.09	254.25	6,262.9	-568.7	-103.0	-533.1	536.2	0.10	0.10	0.0
6,424.0	0.10	197.56	6,357.9	-663.7	-103.1	-533.2	536.4	0.10	0.01	-59.6
6,518.0	0.31	198.44	6,451.9	-757.7	-103.5	-533.3	536.6	0.22	0.22	0.9
6,613.0	0.40	172.34	6,546.9	-852.7	-104.0	-533.4	536.8	0.19	0.09	-27.4
6,707.0	0.31	178.84	6,640.9	-946.7	-104.6	-533.3	536.9	0.10	-0.10	6.9
6,802.0	0.62	207.32	6,735.9	-1,041.7	-105.3	-533.5	537.4	0.40	0.33	29.
6,896.0	0.70	219.18	6,829.9	-1,135.7	-106.2	-534.1	538.3	0.17	0.09	12.0
6,991.0	0.88	218.13	6,924.9	-1,230.7	-107.2	-535.0	539.4	0.19	0.19	-1.1
7,087.0	0.53	199.32	7,020.9	-1,326.7	-108.2	-535.6	540.3	0.43	-0.36	-19.
7,182.0	0.92	208.63	7,115.9	-1,421.7	-109.3	-536.1	541.2	0.43	0.41	9.8
7,277.0	0.93	201.95	7,210.9	-1,516.7	-110.7	-536.7	542.2	0.11	0.01	-7.
7,372.0	1.14	191.14	7,305.8	-1,611.6	-112.4	-537.2	543.2	0.30	0.22	-11.3
7,467.0	1.18	170.05	7,400.8	-1,706.6	-114.2	-537.2	543.9	0.45	0.04	-22.2
7,562.0	1.27	166.09	7,495.8	-1,801.6	-116.2	-536.8	544.2	0.13	0.09	-4.
7,658.0	1.41	156.87	7,591.8	-1,897.6	-118.4	-536.1	544.2	0.27	0.15	-9.0
7,753.0	1.67	151.94	7,686.7	-1,992.5	-120.6	-535.0	544.0	0.31	0.27	-5.
7,848.0	1.93	155.37	7,781.7	-2,087.5	-123.3	-533.6	543.7	0.30	0.27	3.
7,944.0	0.88	182.00	7,877.7	-2,183.5	-125.5	-533.0	543.8	1.26	-1.09	27.
8,040.0	0.97	172.86	7,973.6	-2,279.4	-127.1	-532.9	544.3	0.18	0.09	-9.
8,135.0	1.14	171.63	8,068.6	-2,374.4	-128.8	-532.7	544.6	0.18	0.18	-1.
8,229.0	0.31	184.20	8,162.6	-2,468.4	-130.0	-532.6	544.9	0.89	-0.88	13.
8,324.0	0.31	150.00	8,257.6	-2,563.4	-130.5	-532.5	545.0	0.19	0.00	-36.
8,418.0	0.48	135.68	8,351.6	-2,657.4	-131.0	-532.1	544.8	0.21	0.18	-15.
8,513.0	0.30	142.19	8,446.6	-2,752.4	-131.4	-531.6	544.5	0.19	-0.19	6.
8,607.0	0.26	164.60	8,540.6	-2,846.4	-131.8	-531.4	544.5	0.12	-0.04	23.
8,701.0	0.50	121.01	8,634.6	-2,940.4	-132.3	-531.0	544.2	0.38	0.26	-46.
8,796.0 8,890.0	1.01	113.62	8,729.6	-3,035.4	-132.8	-529.9	543.4	0.55	0.54	-7.
	1.62	113.10	8,823.6	-3,129.4	-133.7	-527.9	541.8	0.65	0.65	-0.
8,985.0	1.93	112.39	8,918.5	-3,224.3	-134.8	-525.2	539.6	0.33	0.33	-0.
9,080.0	1.45	100.88	9,013.5	-3,319.3	-135.6	-522.5	537.4	0.62	-0.51	-12.
9,174.0 9,269.0	1.76	107.30	9,107.5	-3,413.3	-136.3	-520.0	535.2	0.38	0.33	6.
9,364.0	1.89 1.85	102.29 99.47	9,202.4 9,297.4	-3,508.2 -3,603.2	-137.1 -137.6	-517.1 -514.0	532.8 530.1	0.22 0.11	0.14 -0.04	-5.: -2.:
				•						
9,458.0	1.58	104.92	9,391.3	-3,697.1	-138.2	-511.3	527.7	0.34	-0.29	5.
9,553.0	1.49	107.65	9,486.3	-3,792.1	-138.9	-508.8	525.7	0.12	-0.09	2.
9,647.0 9,742.0	1.35 1.45	116.35 138.50	9,580.3 9,675.2	-3,886.1 -3,981.0	-139.8 -141.2	-506.7 -50 <b>4</b> .9	523.9 522.7	0.27 0.58	-0.15 0.11	9. 23.
9,838.0	1.63	137.97	9,771.2	-3,961.0 -4,077.0	-141.2 -143.1	-504.9	522.7 521.8	0.36	0.11	23. -0.
·				•						
9,933.0	1.93	139.29	9,866.1	-4,171.9	-145.3	-501.2	520.7	0.32	0.32	1.3
10,027.0 10,122.0	2.02 1.71	143.51	9,960.1 10,055.0	-4,265.9 -4,360.8	-147.9 150.3	-499.2	519.7	0.18	0.10	4.4
10,122.0	2.15	131.82 129.97	10,055.0	-4,360.8 -4.456.8	-150.2 -152.3	-497.1 -494.7	518.5 516.9	0.51 0.46	-0.33 0.46	-12. -1.
10,218.0	2.16	130.24	10,131.0	-4,456.6 -4,551.7	-152.5 -154.6	-494.7 -492.0	515.9	0.46	0.46	-1.3 0.3
•			•	•						
10,409.0	2.28	130.67	10,341.8	-4,647.6	-157.0	-489.1	513.3	0.13	0.12	0.4
10,504.0	2.37	136.21	10,436.8	-4,742.6 4,970.4	-159.6 167.5	-486.3	511.6 508.6	0.25	0.09	5.8
10 732 0	263	1/176/	10 664 6	_/ Q7N /	-167 5	-\18U 3	502.6	0.25	∩ 11	5

-167.5

-171.3

-174.5

-176.7

-480.3

-478.2

-476.4

-474.9

508.6

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506.7



Date:

Company: **QEP ENERGY** Local Co-ordinate Reference: Well RW 13B4-18C - Slot RW 13B4-18C Project: RED WASH (UTAH) TVD Reference: KB @ 5694.2usft (FRONTIER 2) RW 14-18C (RW13B4-18C) Site: MD Reference: KB @ 5694.2usft (FRONTIER 2) North Reference: Well: RW 13B4-18C True Wellbore: ORIGINAL WELLBORE **Survey Calculation Method:** Minimum Curvature Design: FINAL SURVEYS Database: EDM 5000 1 7 Targets **Target Name** - hit/miss target Dip Angle Dip Dir. TVD Northing +N/-S +E/-W **Easting** - Shape (usft) (usft) (usft) (usft) (usft) (°) Longitude Latitude RW 13B4-18C 0.00 8,104.0 -99.8 -483.6 7.251.018.87 2,264,629.23 40° 12' 16.243 N 109° 15' 53.543 W - survey misses target center by 57.2usft at 8170.1usft MD (8103.7 TVD, -129.4 N, -532.6 E)
- Circle (radius 100.0) **Survey Annotations** Measured Vertical **Local Coordinates** Depth Depth +N/-S +E/-W (üsft) (usft) (usft) (usft) Comment 10,950.0 10,882.3 EXTRAPOLATION TO TD -176.7-474.9

Approved By:

Checked By:

### FINAL SURVEYS - RW 13B4-18C - FRONTIER 2.txt

QEP ENERGY RW 13B4-18C - FINAL SURVEYS

MD Departure	Inc Eastin	Azimuth gs Vert So	TVD ec Dogleg	Subsea J	Latitude	Northings
0.00 0.00 226511	0.00	0.00 0.00	0.00	5694.20	0.00	7251130.76
144.00 -0.10 22651	0.13	322.19 0.05	144.00	5550.20	0.13	7251130.89
233.00	0.26 L09.96	345.74 0.06	0.09 233.00 0.17	5461.20	0.40	7251131.16
320.00	0.40 L09.67	311.29 0.19	320.00	5374.20	0.80	7251131.54
410.00	0.57 L09.09	313.31	0.27 409.99	5284.21	1.31	7251132.04
501.00	0.35	0.54 309.53	0.19 500.99	5193.21	1.80	7251132.52
589.00	L08.54 0.53	0.88 $313.40$	0.24 588.99	5105.21	2.25	7251132.96
682.00	108.02 0.31	1.20 314.19	0.21 681.99	5012.21	2.72	7251133.41
775.00	L07.52 0.70	1.50 344.20	0.24 774.98	4919.22	3.44	7251134.13
864.00	1.58	1.57 318.41	0.49 863.96	4830.24	4.88	7251135.54
923.00	L06.17 2.68	1.98 $306.19$	1.12 922.92	4771.28	6.31	7251136.92
1018.00	L04.48 3.52	3.05 302.24	2.01 1017.78	4676.42	9.17	7251139.68
1114.00	100.15 6.50 5092.86	6.07 300.22	0.91 $1113.41$	4580.79	13.48	7251143.81
1209.00	7.60	11.36 294.06	3.11 1207.69	4486.51	18.75	7251148.82
1305.00	8.17	19.31 281.76	1.40 1302.79	4391.41	22.73	7251152.48
1400.00	5069.78 9.54	29.68 272.27	1.85 1396.66	4297.54	24.42	7251153.81
1496.00	5055.26 10.77 5038.37	42.71 266.64	2.10 1491.15	4203.05	24.20	7251153.17
1591.00	11.73	58.66 261.19	1.65 1584.33	4109.87	22.21	7251150.72
1686.00	5020.02 13.05	76.64 255.22	1.51 1677.12	4017.08	17.99	7251146.00
1781.00	55000.22 14.19 54978.78	96.80 254.51	1769.45	3924.75	12.14	7251139.62
1876.00	14.58		1.21 1861.47	3832.73	5.84	7251132.75
-153.89 226 1971.00	15.64		1953.18	3741.02	-0.96	7251125.35
-177.70 226 2065.00	15.69	167.32 252.38	2043.69	3650.51	-8.38	7251117.33
-201.97 226 2160.00	15.64	192.66 248.80	2135.16	3559.04	-16.90	7251108.21
2256.00	54884.54 14.33	218.30 252.05	1.02 2227.90	3466.30	-25.24	7251099.29
-249.52 226 2351.00	13.71	243.11 254.71	2320.07	3374.13	-31.83	7251092.15
2446.00	54839.52 13.27	266.08 263.04	0.94 2412.46	3281.74	-36.12	7251087.32
2541.00	54817.95 12.39 54796.97	287.93 270.60 308.09	2.10 2505.09 1.99	3189.11	-37.34	7251085.58
<b></b>		203.03		3aaa 1		

Page 1

	ETMAI SIIDV	/EVS _ DM	13P/_18C _	FRONTIER 2.t	v+
2636.00 12.30 -334.55 2264776.71	266.03	2597.90 1.03	3096.30	-37.93	7251084.48
2731.00 12.56 -354.90 2264756.41	263.30	2690.67	3003.53	-39.84	7251082.06
2826.00 13.27 -376.02 2264735.35	264.97	2783.27 0.84	2910.93	-42.00	7251079.37
2920.00 14.19 -398.21 2264713.23	263.04 389.37	2874.58 1.09	2819.62	-44.34	7251076.48
3015.00 14.94 -421.97 2264689.54	265.50	2966.53	2727.67	-46.71	7251073.51
3110.00 15.03 -446.43 2264665.15		1.02 3058.30 0.44	2635.90	-48.98	7251070.64
3205.00 14.85 -470.70 2264640.97	260.75	3150.09	2544.11	-52.24	7251066.77
3300.00 12.61 -492.74 2264619.05	255.13 482.49	0.88 3242.37 2.74	2451.83	-56.86	7251061.60
3396.00 10.94 -511.59 2264600.34	253.28	3336.35	2357.85	-62.17	7251055.82
3490.00 10.37	247.39	1.78 3428.73	2265.47	-67.99	7251049.60
-527.94 2264584.14 3538.00 9.88 -535.81 2264576.35	250.38	1.31 3475.98	2218.22	-71.03	7251046.36
3676.00 7.78 -555.38 2264556.99	244.32	1.50 3612.34	2081.86	-79.06	7251037.85
3770.00 6.33 -565.44 2264547.07	236.58	1.66 3705.63 1.84	1988.57	-84.67	7251031.99
3867.00 5.09 -573.05 2264539.62	226.92	3802.15 1.61	1892.05	-90.55	7251025.91
3962.00 3.12 -576.89 2264535.91	197.21	3896.91 2.99	1797.29	-95.90	7251020.47
4058.00 2.11 -576.42 2264536.47	135.22	3992.83	1701.37	-99.65	7251016.73
4152.00 1.09 -575.08 2264537.83	8.24	2.95 4086.81 3.08	1607.39	-100.00	7251016.42
4246.00 1.98 -576.44 2264536.42	292.92	4180.78	1513.42	-98.48	7251017.91
4341.00 1.95 -576.39 2264536.45	75.25	4275.76	1418.44	-97.43	7251018.96
4437.00 3.25 -572.10 2264540.73	86.11	4371.66	1322.54	-96.83	7251019.67
4534.00 2.99 -566.84 2264545.97	84.18	4468.51	1225.69	-96.38	7251020.24
4626.00 2.68 -562.30 2264550.50	86.99 561.25	4560.40 0.37	1133.80	-96.03	7251020.71
4721.00 2.20 -558.27 2264554.52	85.06 557.37	4655.31 0.51	1038.89	-95.75	7251021.08
4816.00 1.80 -554.96 2264557.82	87.78 554.19	4750.26 0.43	943.94	-95.54	7251021.38
4910.00 1.71 -552.08 2264560.70	93.76 551.50	4844.21	849.99	-95.57	7251021.42
5004.00 1.63 -549.35 2264563.44	93.94	4938.17	756.03	-95.76	7251021.30
5099.00 1.49 -546.78 2264566.02	96.40 546.65	5033.14 0.16	661.06	-95.99	7251021.14
5194.00 1.36 -544.49 2264568.31	110.81	5128.11 0.40	566.09	-96.53	7251020.66
5288.00 1.49 -542.33 2264570.50	113.10	5222.08 0.15	472.12	-97.40	7251019.84
5383.00 1.63 -539.97 2264572.88	115.65	5317.04	377.16	-98.47	7251018.83
5477.00 1.71 -537.57 2264575.31	121.53	0.16 5411.00 0.20	283.20	-99.78	7251017.57
5572.00 1.63	124.70	5505.96	188.24	-101.29	7251016.12
			Page 2		

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	ETNAL SURV	VEVS - RW	13R4-18C -	FRONTIER 2.t	v+
-535.25 2264577.67	537.63	0.13			
5667.00 1.76 -532.95 2264580.01	125.05 536.02	5600.92 0.14	93.28	-102.90	7251014.57
5762.00 0.22 -531.93 2264581.05	280.88 535.34	5695.91	-1.71	-103.71	7251013.80
5856.00 0.35	271.21	5789.91	-95.71	-103.67	7251013.82
-532.40 2264580.58 5951.00 0.35	535.76 291.31	5884.91	-190.71	-103.55	7251013.92
-532.96 2264580.02 6046.00 0.22	354.80	5979.90	-285.70	-103.27	7251014.20
-533.25 2264579.72 6140.00 0.13	536.42 72.93	0.34 6073.90	-379.70	-103.06	7251014.41
-533.16 2264579.80 6235.00 0.00	536.27 100.88	0.25 6168.90	-474.70	-103.02	7251014.45
-533.06 2264579.91 6329.00 0.09	536.16 254.25	0.14 6262.90	-568.70	-103.04	7251014.43
-533.13 2264579.84 6424.00 0.10	536.23 197.56	0.10 6357.90	-663.70	-103.14	7251014.32
-533.22 2264579.74	536.36	0.10			
6518.00 0.31 -533.33 2264579.64	198.44 536.57	6451.90 0.22	-757.70	-103.46	7251014.00
6613.00 0.40 -533.37 2264579.62	172.34 536.80	6546.90	-852.70	-104.03	7251013.43
6707.00 0.31 -533.32 2264579.68	178.84 536.95	6640.90	-946.70	-104.61	7251012.85
6802.00 0.62	207.32	6735.90	-1041.70	-105.33	7251012.13
-533.55 2264579.47 6896.00 0.70	537.41 219.18	0.40 6829.89	-1135.69	-106.22	7251011.22
-534.14 2264578.90 6991.00 0.88	538.28 218.13	0.17 6924.88	-1230.68	-107.25	7251010.18
-534.96 2264578.11 7087.00 0.53	539.40 199.32	7020.87	-1326.67	-108.25	7251009.16
-535.56 2264577.53 7182.00 0.92	540.30 208.63	0.43 7115.87	-1421.67	-109.33	7251008.07
-536.07 2264577.05 7277.00 0.93	541.15 201.95	0.43 7210.85	-1516.65	-110.72	7251006.67
-536.73 2264576.43 7372.00 1.14	542.24 191.14	7305.84	-1611.64	-112.36	7251005.01
-537.20 2264576.00 7467.00 1.18	543.24 170.05	7400.82	-1706.62	-114.25	7251003.12
-537.21 2264576.03 7562.00 1.27	543.90 166.09	0.45 7495.80	-1801.60	-116.23	7251001.15
-536.79 2264576.50 7658.00 1.41	544.19 156.87	0.13 7591.77	-1897.57		7250999.05
-536.07 2264577.28	544.23 151.94		-1992.54		7250996.78
-534.96 2264578.44	543.98	0.31		-120.65	
7848.00 1.93 -533.64 2264579.83	155.37 543.65	7781.69 0.30	-2087.49	-123.33	7250994.14
7944.00 0.88 -532.99 2264580.53	182.00 543.80	7877.66	-2183.46	-125.53	7250991.95
8040.00 0.97 -532.92 2264580.64	172.86	7973.65	-2279.45	-127.07	7250990.41
8135.00 1.14	544.25 171.63	8068.63	-2374.43	-128.81	7250988.68
-532.68 2264580.93 8229.00 0.31	544.62 184.20	8162.62	-2468.42	-129.99	7250987.51
-532.56 2264581.07 8324.00 0.31	544.92 150.00	8257.62	-2563.42	-130.47	7250987.03
-532.45 2264581.19 8418.00 0.48	544.98 135.68	8351.62	-2657.42	-130.97	7250986.54
-532.05 2264581.61 8513.00 0.30	544.77 142.19	8446.62	-2752.42	-131.45	7250986.07
-531.62 2264582.05	544.53	0.19	Page 3		

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TINAL SURVEYS - RW 1384-18C - FRONTIER 2.txt		ETNAL SUDVEVS - DW	1384-18C -	EDONTTED 2 +	v+
-531.41 2264582.27 544.47 0.12 8701.00 0.50 121.01 8634.62 -2940.42 -132.27 7250985.27 541.01 2264582.69 544.23 0.38 8796.00 1.01 13.62 8729.61 -3035.41 -132.81 7250984.75 88980.00 1.62 131.0 8823.58 -3129.38 -133.67 7250983.95 8898.500 1.93 112.39 8918.54 -3224.34 -134.80 7250982.88 125.39 2264585.82 541.79 0.65 8985.00 1.93 120.39 8918.54 -3224.34 -134.80 7250982.88 125.39 2264591.24 537.42 0.62 9174.00 1.45 9102.29 9202.41 -3508.21 -3508.21 -3603.16 -335.25 9364.00 1.89 102.29 9202.41 -3508.21 -3508.21 -37.06 7250980.82 -351.27 0.22 9324.00 1.89 102.29 9202.41 -3508.82 2264599.80 9303.49 -3519.29 920.41 9458.00 1.58 104.92 9391.32 -3603.16 -137.65 7250980.82 -351.27 2264602.57 9364.00 1.85 94.7 9297.36 -3603.16 -137.65 7250980.82 -351.27 2264602.57 9364.00 1.85 10.63 946.28 -3792.08 -138.89 7250979.80 933.00 1.49 10.65 946.28 -3792.08 -138.89 7250979.15 -360.87 2264600.01 1.35 10.63 95 980.25 -3886.05 -139.80 7250978.34 9383.00 1.63 139.29 9866.15 -303.15 2264610.80 522.72 0.58 9333.00 1.63 139.29 9866.15 -303.15 2264610.80 522.72 0.58 9333.00 1.63 139.29 9866.15 -4074.91 2264612.81 10027.00 2.02 143.51 960.91 -4076.99 -143.12 7250976.99 10218.00 2.16 138.50 0.51 10218.00 2.15 129.91 10027.00 2.02 143.51 960.91 -406.99 143.12 7250976.99 10218.00 2.15 129.97 10150.98 499.18 2264614.89 1519.66 0.18 101218.00 2.15 129.97 10150.98 498.12 2264622.8 151.516 0.02 14045.77 131.82 10055.04 -4456.78 -155.28 7250966.17 -499.19 2264622.8 151.516 0.02 14046.79 1404	8607 00 0 26				
8701.00         0.50         121.01         8634.62         -2940.42         -132.27         7250985.27           -531.01         2264582.69         544.23         0.38         -3035.41         -132.81         7250984.75           8890.00         1.62         131.00         8823.58         -3129.38         -133.67         7250983.95           527.790         2264585.82         541.79         0.65         -3224.34         -134.80         7250982.88           525.51.9         2264585.82         539.63         0.33         -3224.34         -134.80         7250982.88           525.51.9         2264591.24         539.63         0.33         -3413.26         -135.64         7250982.88           -522.53         2264591.24         537.42         0.62         -3413.26         -135.64         7250982.81           -519.98         2264593.81         535.25         0.38         -322.41         -3508.21         -137.06         7250980.82           511.02         2264599.80         1002.29         9202.41         -3508.21         -137.06         7250980.82           511.27         2264602.57         527.72         0.34         -3792.08         -138.83         7250976.99           504.87         226460			-2040.42	TJT.07	7230303.00
-531.01 2264582.69 544.23 0.38 8796.00 1.01 113.62 8729.61 -3035.41 -132.81 7250984.75 -529.88 2264583.82 8890.00 1.62 113.10 8823.58 -3129.38 -133.67 7250983.95 -527.90 2264585.82 112.39 8918.54 -3224.34 -134.80 7250982.88 -525.19 2264588.57 596.03 0.33 9080.00 1.45 100.88 9013.49 -3319.29 -135.64 7250982.11 -522.53 2264591.24 537.42 0.62 9174.00 1.76 107.30 9107.46 -3413.26 -136.29 7250981.52 -314.02 2264593.81 9269.00 1.89 102.29 920.41 -3508.21 -137.06 7250980.82 -517.06 2264596.75 532.76 0.22 9364.00 1.85 99.47 9297.36 -3603.16 -137.65 7250980.82 -511.27 2264602.57 527.72 0.34 9553.00 1.49 104.92 9391.32 -3697.12 -138.23 7250979.80 -511.27 2264605.03 525.67 0.12 9647.00 1.35 16.35 9580.25 -3886.05 -139.80 7250978.34 -508.82 2264605.03 525.67 0.12 9647.00 1.45 138.50 9657.23 -3981.03 -141.20 7250976.99 9393.00 1.93 19.29 9866.15 -497.13 2264610.80 521.76 0.19 9333.00 1.93 19.29 9866.15 -139.80 7250975.11 -1302.02 0.14 1.35 13.82 10055.04 -499.18 2264612.81 10022.00 1.71 10218.00 2.15 13.182 10055.04 -499.18 2264612.81 10022.00 1.71 10218.00 2.15 13.32 136.21 1034.85 9580.25 1034.89 12 2264622.88 10027.00 2.64 13.13.22 10034.185 10034.00 2.37 136.21 10436.77 -4742.57 -159.64 7250950.02 149.91.52 2264622.85 151.16 0.02 149.91.52 2264628.03 10732.00 2.63 147.64 10664.55 -499.18 2264618.49 136.27 2264638.33 10732.00 2.64 147.64 10664.55 -499.18 2264638.49 136.27 10466.95 151.60 0.25 147.64 10664.55 -499.18 2264638.33 10732.00 2.64 147.64 10664.55 -499.18 2264638.33 10732.00 2.64 147.64 10664.55 -499.18 2264638.33 10732.00 2.64 147.64 10664.55 -499.18 2264638.33 10732.00 2.64 147.64 10664.55 -490.03 148.55 10834.36 -507.35 0.67 10344.88 138.29 -5188.09 -176.72 7250942.23			-2940 42	-132 27	7250085 27
8796.00         1.01         113.62         8729.61         -3035.41         -132.81         7250984.75           529.88         2264583.82         543.36         0.55         8890.00         1.62         133.10         8823.58         -3129.38         -133.67         7250983.95           527.790         2264585.82         541.79         0.65         -3224.34         -134.80         7250982.88           5252.51         2264588.57         539.63         0.33         -3319.29         -135.64         7250982.88           522.253         2264591.24         537.42         0.62         -3413.26         -136.29         7250982.11           522.253         2264591.24         537.42         0.62         -3413.26         -136.29         7250981.52           519.98         2264591.24         537.42         0.62         -3413.26         -136.29         7250981.52           519.98         2264591.24         537.42         0.62         -3413.26         -137.06         7250980.81           511.02         2264599.80         501.00         0.13         -3603.16         -137.65         7250980.82           511.27         2264602.75         523.76         0.22         -3499.12         -138.23         7250979.80 </td <td></td> <td></td> <td>-2340.42</td> <td>-177.71</td> <td>1230303.21</td>			-2340.42	-177.71	1230303.21
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8890.00         1.62         113.10         8823.58         -3129.38         -133.67         7250983.95           -527.90         2264585.82         541.79         0.65         8985.00         1.93         112.39         8918.54         -3224.34         -134.80         7250982.88           -525.19         2264581.24         537.42         0.62         9174.00         1.76         107.30         9107.46         -3413.26         -136.29         7250980.82           -519.98         2264593.81         535.25         0.38         9269.00         1.89         102.29         9202.41         -3508.21         -137.06         7250980.82           -517.06         2264599.80         530.10         0.22         9391.32         -3603.16         -137.65         7250980.82           -511.27         22646025.79         527.72         0.34         -3697.12         -138.23         7250979.80           -511.27         2264602.57         527.72         0.34         -3792.08         -138.94         7250979.80           -504.87         2264607.20         523.94         0.27         -386.25         -3886.05         -139.80         7250976.99           -504.80         2264610.80         521.76         0.58         962.72			-3033.41	-132.61	7230964.73
-527.90 2264585.82			2120 20	122 67	7250002 OF
8885.00         1.93         112.39         8918.54         -3224.34         -134.80         7250982.88           -525.19         2264588.57         539.63         0.33         -3319.29         -135.64         7250982.11           -522.53         2264591.24         537.42         0.62         -3413.26         -136.29         7250981.52           -519.98         2264593.81         535.25         0.38         -3508.21         -137.06         7250980.82           -517.06         2264596.75         532.76         0.22         99.47         9297.36         -3603.16         -137.65         7250980.82           -514.02         2264599.80         501.10         0.11         -3458.00         1.58         507.72         0.34         -3697.12         -138.23         7250980.31           -511.02         2264602.57         527.72         0.34         -3667.12         -138.23         7250979.80           -511.27         2264605.03         525.67         0.12         -3866.05         -138.94         7250979.15           -506.67         2264607.20         523.94         0.27         -3886.05         -139.80         7250976.99           -501.20         2264612.80         137.97         97711.19         -4076.99			-3173.30	-133.01	7230903.93
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9080.00			-3224.34	-134.80	7230902.00
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-514.02         2264599.80         530.10         0.11         -3458.00         1.58         104.92         9391.32         -3697.12         -138.23         7250979.80           -511.27         2264602.57         527.72         0.34         -3697.12         -138.23         7250979.80           -508.82         2264605.03         107.65         9486.28         -3792.08         -138.94         7250979.15           -506.67         2264607.20         15         525.67         0.12         -3886.05         -139.80         7250978.34           -506.67         2264609.04         522.72         0.58         -3886.05         -139.80         7250978.34           -504.87         2264609.04         522.72         0.58         -3886.05         -139.80         7250978.34           -504.87         2264610.80         163         137.97         9771.19         -4076.99         -143.12         7250975.11           -503.15         2264612.81         139.29         9866.15         -4171.95         -145.34         7250972.94           -499.18         2264614.89         131.82         10055.04         -4360.84         -150.16         7250966.17           -497.13         2264619.49         131.82         10055.04			2602 16	137 66	7250000 21
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-508.82         2264605.03         525.67         0.12         -3886.05         -139.80         7250978.34           -506.67         2264607.20         523.94         0.27         -3981.03         -141.20         7250976.99           -504.87         2264609.04         522.72         0.58         -3886.05         -141.20         7250976.99           -503.15         2264610.80         521.76         0.19         -4076.99         -143.12         7250975.11           -503.15         2264610.80         521.76         0.19         -933.00         1.93         139.29         9866.15         -4171.95         -145.34         7250972.94           -501.20         2264612.81         520.69         0.32         -476.89         -147.87         7250970.46           -499.18         2264614.89         519.66         0.18         -147.87         7250970.46           -497.13         2264617.00         1.51         129.97         10150.98         -4456.78         -150.16         7250968.22           -491.95         2264622.28         129.97         10341.85         -467.65         -156.99         7250961.60           -489.12         2264625.17         513.32         0.13         -4647.65         -156.99         72			2702 00	120.04	7350070 45
9647.00 1.35			-3792.08	-138.94	7250979.15
-506.67         2264607.20         523.94         0.27           9742.00         1.45         138.50         9675.23         -3981.03         -141.20         7250976.99           -504.87         2264609.04         522.72         0.58         -4076.99         -143.12         7250975.11           -503.15         2264610.80         521.76         0.19         -4076.99         -143.12         7250975.11           -501.20         2264612.81         520.69         0.32         -4076.99         -145.34         7250975.11           -501.20         2264612.81         520.69         0.32         -4076.99         -145.34         7250975.11           -501.20         2264612.81         520.69         0.32         -4076.99         -145.34         7250975.11           -501.20         2264612.81         520.69         0.32         -4076.99         -147.87         7250972.94           -699.18         2264614.89         519.66         0.18         -141.20         7250975.11           -499.18         2264614.89         519.66         0.18         -147.87         7250970.46           -499.18         2264617.00         518.52         0.51         -150.16         7250968.22           -499.18			2006 05	420.00	7250070 24
9742.00 1.45			-3886.05	-139.80	7250978.34
-504.87 2264609.04 9838.00 1.63 137.97 9771.19 -4076.99 -143.12 7250975.11   -503.15 2264610.80 521.76 0.19   9933.00 1.93 139.29 9866.15 -4171.95 -145.34 7250972.94   -501.20 2264612.81 520.69 0.32   10027.00 2.02 143.51 9960.09 -4265.89 -147.87 7250970.46   -499.18 2264614.89 519.66 0.18   10122.00 1.71 18.82 10055.04 -4360.84 -150.16 7250968.22   -497.13 2264617.00 518.52 0.51   10218.00 2.15 129.97 10150.98 -4456.78 -152.28 7250966.17   -494.68 2264619.49 130.24 10245.92 -4551.72 -154.58 7250963.94   -491.95 226462.28 515.16 0.02   -489.12 226462.28 130.67 10341.85 -4647.65 -156.99 7250961.60   -489.12 2264625.17 136.21 10436.77 -4742.57 -159.64 7250959.02   -486.33 2264628.03 136.21 10436.77 -4742.57 -159.64 7250959.02   -486.33 2264638.34 10456.55 -4970.35 -167.46 7250951.36   -480.27 2264634.29 508.58 0.25   10827.00 2.64 154.76 10759.45 -5065.25 -171.28 7250947.59   -478.17 2264636.48 10902.00 3.03 148.25 10834.36 -5140.16 -174.53 7250944.39   -476.39 2264638.34 507.35 0.67   10950.00 3.28 144.08 10882.29 -5188.09 -176.72 7250942.23			2224 22	444.00	<b></b>
9838.00			-3981.03	-141.20	7250976.99
-503.15 2264610.80 521.76 0.19 9933.00 1.93 139.29 9866.15 -4171.95 -145.34 7250972.94 -501.20 2264612.81 520.69 0.32 143.51 9960.09 -4265.89 -147.87 7250970.46 -499.18 2264614.89 519.66 0.18 10122.00 1.71 131.82 10055.04 -4360.84 -150.16 7250968.22 -497.13 2264617.00 518.52 0.51 10218.00 2.15 129.97 10150.98 -4456.78 -152.28 7250966.17 -494.68 2264619.49 516.94 0.46 130.24 10245.92 -4551.72 -154.58 7250963.94 -491.95 2264622.28 515.16 0.02 10409.00 2.28 130.67 10341.85 -4647.65 -156.99 7250961.60 -489.12 2264625.17 513.32 0.13 10504.00 2.37 136.21 10436.77 -4742.57 -159.64 7250959.02 -486.33 2264628.03 10732.00 2.63 147.64 10664.55 -4970.35 -167.46 7250951.36 -478.17 2264636.48 507.91 0.34 10902.00 3.03 148.25 10834.36 -5140.16 -174.53 7250944.39 -476.39 2264638.34 507.35 0.67 10950.00 3.28 144.08 10882.29 -5188.09 -176.72 7250942.23				440.40	
9933.00		137.97 9771.19	-4076.99	-143.12	7250975.11
-501.20 2264612.81 520.69 0.32 143.51 9960.09 -4265.89 -147.87 7250970.46					
10027.00       2.02       143.51       9960.09       -4265.89       -147.87       7250970.46         -499.18       2264614.89       519.66       0.18         10122.00       1.71       131.82       10055.04       -4360.84       -150.16       7250968.22         -497.13       2264617.00       518.52       0.51			-4171.95	-145.34	7250972.94
-499.18 2264614.89 10122.00 1.71 121.82 10055.04 121.82 10055.04 10218.00 2.15 129.97 10150.98 10313.00 2.16 130.24 10245.92 10409.00 2.28 130.67 10341.85 133.2 0.13 10504.00 2.37 136.21 10436.77 10504.00 2.37 136.21 10436.77 10504.00 2.37 136.21 10436.77 10504.00 2.37 136.21 10436.77 10504.00 2.37 136.21 10436.77 10504.00 2.37 136.21 10436.77 10504.00 2.63 147.64 10664.55 10827.00 2.63 147.64 10664.55 10827.00 2.64 154.76 10759.45 154.76 10759.45 154.76 10759.45 154.76 10759.45 154.76 10759.45 10827.00 3.03 148.25 10834.36 10902.00 3.03 148.25 10834.36 10902.00 3.28 144.08 10882.29 15188.09 176.72 7250942.23       -150.16 7250968.22 150.16 7250968.22 154.56 1050.84 1086.84 1086.84 1086.84 1086.84 10882.29 158.09					
10122.00       1.71       131.82       10055.04       -4360.84       -150.16       7250968.22         -497.13       2264617.00       518.52       0.51       129.97       10150.98       -4456.78       -152.28       7250966.17         -494.68       2264619.49       516.94       0.46       130.24       10245.92       -4551.72       -154.58       7250963.94         -491.95       2264622.28       515.16       0.02       10409.00       2.28       130.67       10341.85       -4647.65       -156.99       7250961.60         -489.12       2264625.17       513.32       0.13       10504.00       2.37       136.21       10436.77       -4742.57       -159.64       7250959.02         -486.33       2264628.03       511.60       0.25       -4970.35       -167.46       7250951.36         -480.27       2264634.29       508.58       0.25         10827.00       2.64       154.76       10759.45       -5065.25       -171.28       7250947.59         -478.17       2264636.48       507.91       0.34       -10902.00       3.03       148.25       10834.36       -5140.16       -174.53       7250944.39         -476.39       2264638.34       507.35       0.67	10027.00 2.02		-4265.89	-147.87	7250970.46
-497.13       2264617.00       518.52       0.51         10218.00       2.15       129.97       10150.98       -4456.78       -152.28       7250966.17         -494.68       2264619.49       516.94       0.46       10313.00       2.16       130.24       10245.92       -4551.72       -154.58       7250963.94         -491.95       2264622.28       515.16       0.02       10409.00       2.28       130.67       10341.85       -4647.65       -156.99       7250961.60         -489.12       2264625.17       513.32       0.13       10504.00       2.37       136.21       10436.77       -4742.57       -159.64       7250959.02         -486.33       2264628.03       511.60       0.25       10732.00       2.63       147.64       10664.55       -4970.35       -167.46       7250951.36         -480.27       2264634.29       508.58       0.25       10827.00       2.64       154.76       10759.45       -5065.25       -171.28       7250947.59         -478.17       2264638.34       507.35       0.67       10950.00       3.28       144.08       10882.29       -5188.09       -176.72       7250942.23					
10218.00       2.15       129.97       10150.98       -4456.78       -152.28       7250966.17         -494.68       2264619.49       516.94       0.46       10313.00       2.16       130.24       10245.92       -4551.72       -154.58       7250963.94         -491.95       2264622.28       515.16       0.02       10409.00       2.28       130.67       10341.85       -4647.65       -156.99       7250961.60         -489.12       2264625.17       513.32       0.13       0.13       0.25			-4360.84	-150.16	7250968.22
-494.68       2264619.49       516.94       0.46         10313.00       2.16       130.24       10245.92       -4551.72       -154.58       7250963.94         -491.95       2264622.28       515.16       0.02       10409.00       2.28       130.67       10341.85       -4647.65       -156.99       7250961.60         -489.12       2264625.17       513.32       0.13       10504.00       2.37       136.21       10436.77       -4742.57       -159.64       7250959.02         -486.33       2264628.03       511.60       0.25       10732.00       2.63       147.64       10664.55       -4970.35       -167.46       7250951.36         -480.27       2264634.29       508.58       0.25       10827.00       2.64       154.76       10759.45       -5065.25       -171.28       7250947.59         -478.17       2264636.48       507.91       0.34       10902.00       3.03       148.25       10834.36       -5140.16       -174.53       7250944.39         -476.39       2264638.34       507.35       0.67       10950.00       3.28       144.08       10882.29       -5188.09       -176.72       7250942.23					
10313.00			-4456.78	-152.28	7250966.17
-491.95       2264622.28       515.16       0.02         10409.00       2.28       130.67       10341.85       -4647.65       -156.99       7250961.60         -489.12       2264625.17       513.32       0.13       10504.00       2.37       136.21       10436.77       -4742.57       -159.64       7250959.02         -486.33       2264628.03       511.60       0.25 <td< td=""><td></td><td></td><td></td><td></td><td></td></td<>					
10409.00       2.28       130.67       10341.85       -4647.65       -156.99       7250961.60         -489.12       2264625.17       513.32       0.13         10504.00       2.37       136.21       10436.77       -4742.57       -159.64       7250959.02         -486.33       2264628.03       511.60       0.25         10732.00       2.63       147.64       10664.55       -4970.35       -167.46       7250951.36         -480.27       2264634.29       508.58       0.25       -171.28       7250947.59         -478.17       2264636.48       507.91       0.34       -174.53       7250944.39         -476.39       2264638.34       507.35       0.67       -174.53       7250942.23         10950.00       3.28       144.08       10882.29       -5188.09       -176.72       7250942.23			-4551.72	-154.58	7250963.94
-489.12       2264625.17       513.32       0.13         10504.00       2.37       136.21       10436.77       -4742.57       -159.64       7250959.02         -486.33       2264628.03       511.60       0.25					
10504.00     2.37     136.21     10436.77     -4742.57     -159.64     7250959.02       -486.33     2264628.03     511.60     0.25       10732.00     2.63     147.64     10664.55     -4970.35     -167.46     7250951.36       -480.27     2264634.29     508.58     0.25       10827.00     2.64     154.76     10759.45     -5065.25     -171.28     7250947.59       -478.17     2264636.48     507.91     0.34       10902.00     3.03     148.25     10834.36     -5140.16     -174.53     7250944.39       -476.39     2264638.34     507.35     0.67       10950.00     3.28     144.08     10882.29     -5188.09     -176.72     7250942.23			-4647.65	-156.99	7250961.60
-486.33       2264628.03       511.60       0.25         10732.00       2.63       147.64       10664.55       -4970.35       -167.46       7250951.36         -480.27       2264634.29       508.58       0.25       -171.28       7250947.59         -478.17       2264636.48       507.91       0.34       -174.53       7250944.39         -476.39       2264638.34       507.35       0.67       -174.53       7250942.23         10950.00       3.28       144.08       10882.29       -5188.09       -176.72       7250942.23					
10732.00     2.63     147.64     10664.55     -4970.35     -167.46     7250951.36       -480.27     2264634.29     508.58     0.25       10827.00     2.64     154.76     10759.45     -5065.25     -171.28     7250947.59       -478.17     2264636.48     507.91     0.34       10902.00     3.03     148.25     10834.36     -5140.16     -174.53     7250944.39       -476.39     2264638.34     507.35     0.67       10950.00     3.28     144.08     10882.29     -5188.09     -176.72     7250942.23			-4742.57	-159.64	7250959.02
-480.27       2264634.29       508.58       0.25         10827.00       2.64       154.76       10759.45       -5065.25       -171.28       7250947.59         -478.17       2264636.48       507.91       0.34       -174.53       7250944.39         -476.39       2264638.34       507.35       0.67       -176.72       7250942.23         10950.00       3.28       144.08       10882.29       -5188.09       -176.72       7250942.23					
10827.00     2.64     154.76     10759.45     -5065.25     -171.28     7250947.59       -478.17     2264636.48     507.91     0.34       10902.00     3.03     148.25     10834.36     -5140.16     -174.53     7250944.39       -476.39     2264638.34     507.35     0.67       10950.00     3.28     144.08     10882.29     -5188.09     -176.72     7250942.23			-4970.35	-167.46	7250951.36
-478.17     2264636.48     507.91     0.34       10902.00     3.03     148.25     10834.36     -5140.16     -174.53     7250944.39       -476.39     2264638.34     507.35     0.67       10950.00     3.28     144.08     10882.29     -5188.09     -176.72     7250942.23	-480.27 2264634.29				
10902.00 3.03 148.25 10834.36 -5140.16 -174.53 7250944.39 -476.39 2264638.34 507.35 0.67 10950.00 3.28 144.08 10882.29 -5188.09 -176.72 7250942.23			-5065.25	-171.28	7250947.59
-476.39 2264638.34 507.35 0.67 10950.00 3.28 144.08 10882.29 -5188.09 -176.72 7250942.23		507.91 0.34			
10950.00 3.28 144.08 10882.29 -5188.09 -176.72 7250942.23			-5140.16	-174.53	7250944.39
			E100 00	476 70	7250042 22
-4/4.92 2264639.8/ 506./2 0./1	10950.00 3.28		-2188.09	-1/6./2	7250942.23
	-4/4.92 2264639.8/	506.72 0.71			

Sundry Number: 45848 API Well Number: 43047522430000

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCE		FORM 9
[	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU02148		
SUNDR	Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly reenter plugged wells, or to drill horizo n for such proposals.		7.UNIT or CA AGREEMENT NAME: RED WASH
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: RW 13B4-18C
2. NAME OF OPERATOR: QEP ENERGY COMPANY			9. API NUMBER: 43047522430000
3. ADDRESS OF OPERATOR: 11002 East 17500 South,	Vernal, Ut, 84078 303	PHONE NUMBER: 308-3068 Ext	9. FIELD and POOL or WILDCAT: RED WASH
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0911 FSL 0800 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	<mark>HP, RANGE, MERIDIAN:</mark> 18 Township: 07.0S Range: 24.0E Merio	dian: S	STATE: UTAH
11. CHECH	K APPROPRIATE BOXES TO INDICAT	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
7.pproximus data notic nin statu	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
11/17/2012	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	✓ RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
кероп раце.		SI TA STATUS EXTENSION	
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
INTERIM RECLAIM	COMPLETED OPERATIONS. Clearly show a MED IN FALL 2012, SEE ATTAC JNDRY. FOR DOGM RECORD	CHED BLM APPROVED	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY December 12, 2013
NAME (PLEASE PRINT) Amanda Taylor	<b>PHONE NUMB</b> 435 247-1023	ER TITLE Reclamation Technician	
SIGNATURE N/A		<b>DATE</b> 12/12/2013	

Sundry Number: 4584	18 API Well Numb	er: 43047522430	000	
	UNITED STATES EPARTMENT OF THE INT UREAU OF LAND MANAGE		OMB N Expires	I APPROVED NO. 1004-0135 :: July 31, 2010
	NOTICES AND REPORT		5. Lease Serial No. UTU02148	
Do not use the abandoned we	6. If Indian, Allottee	or Tribe Name		
	PLICATE - Other instruction	ons on reverse side.	7. If Unit or CA/Agr 892000761D	eement, Name and/or No.
1. Type of Well			8. Well Name and No RW 13B4-18C	).
Oil Well Gas Well Oth  Name of Operator		MANDA TAYLOR	9. API Well No.	
QEP ENÈRGY COMPANY	E-Mail: amanda.taylo		43-047-52243-	
3a. Address 11002 EAST 17500 SOUTH VERNAL, UT 84078		Bb. Phone No. (include area code) Ph: 435-247-1023	10. Field and Pool, o RED WASH	r Exploratory
4. Location of Well (Footage, Sec., T	., R., M., or Survey Description)		11. County or Parish	, and State
Sec 18 T7S R24E Lot 4 911F 40.204786 N Lat, 109.263142			UINTAH COU	NTY, UT
12. CHECK APPI	ROPRIATE BOX(ES) TO I	NDICATE NATURE OF N	NOTICE, REPORT, OR OTHE	ER DATA
TYPE OF SUBMISSION		TYPE OF	FACTION	
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☑ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	■ Reclamation	☐ Well Integrity
	Casing Repair	□ New Construction	Recomplete	☐ Other
☐ Final Abandonment Notice	☐ Change Plans ☐ Convert to Injection	☐ Plug and Abandon☐ Plug Back	<ul><li>☐ Temporarily Abandon</li><li>☐ Water Disposal</li></ul>	
following completion of the involved testing has been completed. Final Al determined that the site is ready for f RW 13B4-18C WAS DOWNS ENERGY COMPANY, UINTA DISTRICT RECLAMATION G  1. ALL NON-ESSENTIAL EQI 2. AREAS NOT NEEDED FOR BLEND WITH THE SURROU	I operations. If the operation result candonment Notices shall be filed of inal inspection.)  IZED AND RECLAIMED IN BASIN DIVISION, RECLAMUIDELINES. RECLAMATIOUIDELINES. RECLAMATIOUIDELINES. RECLAMATIOUIDELINES. RECLAMATIOUIDELINES. RECLAMATIOUIDELINES. TOPORTATION OPERATION	ts in a multiple completion or recoonly after all requirements, includ FALL 2012. RECLAMATIO MATION PLAN, SEPTEMBE DN SPECIFIC TO THIS LOC ERE REMOVED. ONS WERE RIPPED TO R PSOIL WAS SPREAD TO TO THE APPROVED SEED MIX	ELIEVE COMPACTION AND I HE APPROPRIATE DEPTH. X. CERTIFIED WEED FREE S	60-4 shall be filed once, and the operator has  THE QEP IN RIVER  RECONTOURED TO
Comr Name(Printed/Typed) AMANDA	For QEP ENE nitted to AFMSS for processir	= -	Vernal	
Signature (Electronic S	Submission)	Date 03/21/2	013	
	THIS SPACE FOR	FEDERAL OR STATE	OFFICE USE	
Approved By ACCEPT	ED	JERRY KE <sub>Title</sub> AFM FOR	ENCZKA MINERAL RESOURCES	Date 08/22/201
Conditions of approval, if any, are attache certify that the applicant holds legal or equivalent would entitle the applicant to conduct the conduction of th	uitable title to those rights in the su	ot warrant or abject lease Office Vernal		
Title 18 U.S.C. Section 1001 and Title 43 States any false, fictitious or fraudulent	U.S.C. Section 1212, make it a cristatements or representations as to	me for any person knowingly and any matter within its jurisdiction.	willfully to make to any department of	r agency of the United

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\*

Sundry Number: 45848 API Well Number: 43047522430000

### Additional data for EC transaction #202187 that would not fit on the form

#### 32. Additional remarks, continued

THE ACTIVE AREA IS 2.38 ACRES

THE ROW WILL BE MONITORED PER QEP'S RECLAMATION PLAN.

RECEIVED: Dec. 12, 2013

Sundry Number: 45848 API Well Number: 43047522430000

#### Revisions to Operator-Submitted EC Data for Sundry Notice #202187

**Operator Submitted BLM Revised (AFMSS)** 

**RECL** Sundry Type: SR SR

Lease: UTU02148 UTU02148

Agreement: **RED WASH** 892000761D (UTU63010D)

QEP ENERGY COMPANY 11002 EAST 17500 SOUTH VERNAL, UT 84078 Ph: 435-781-4032 Operator: **QEP ENERGY COMPANY** 

11002 EAST 17500 SOUTH VERNAL, UT 84078 Ph: 435-247-1023 Fx: 435-781-4045

AMANDA TAYLOR Admin Contact:

AMANDA TAYLOR RECLAMATION TECHNICIAN RECLAMATION TECHNICIAN E-Mail: AMANDA.TAYLOR@QEPRES.COM E-Mail: amanda.taylor@qepres.com

Ph: 435-247-1023 Ph: 435-247-1023

Tech Contact:

AMANDA TAYLOR RECLAMATION TECHNICIAN E-Mail: AMANDA.TAYLOR@QEPRES.COM AMANDA TAYLOR RECLAMATION TECHNICIAN E-Mail: amanda.taylor@qepres.com

Ph: 435-247-1023 Ph: 435-247-1023

Location:

UT UINTAH State: **ÜİNTAH** County: Field/Pool: **RED WASH RED WASH** 

Well/Facility: RW 13B4-18C RW 13B4-18C

Sec 18 T7S R24E NWSW 911FSL 800FWL Sec 18 T7S R24E Lot 4 911FSL 800FWL 40.204780 N Lat, 109.263010 W Lon 40.204786 N Lat, 109.263142 W Lon